City Council of Gibraltar.

ANNUAL REPORT

ON THE

HEALTH OF GIBRALTAR

FOR THE YEAR

1925

BY

Lieut.-Colonel W. C. SMALES, D.S.O., R.A.M.C.,
Medical Officer of Health.

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Medical Officer of Health.

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PREFACE.

The Annual Report shows that the health of Gibraltar was very satisfactory during 1925, and the statistics recorded compare favourably with those of any previous year.

The infant mortality rate of 83 per 1,000 births is the lowest recorded since 1913.

The local press continued to co-operate and help in all health propaganda schemes and rendered great assistance during the year.

I have to thank the Chairman and members of the Council for their continued interest and support, and the various members of my staff for their loyal assistance.

W. C. SMALES,
Lieut.-Colonel, R.A.M.C.,
Medical Officer of Health.

REPORT OF MEDICAL OFFICER OF HEALTH.

SUMMARY OF VITAL STATISTICS FOR 1925.

Total area of Gibraltar Territory	1,387 acres, 2 roods, 3 poles
Area of the City	104 acres, 3 roods, 33 poles
Estimated Total Civil Population of Gibraltar	17,288 persons
Estimated Fixed Civil Population of Gibraltar	16,127 persons
Births in Fixed Civil Population	Males 179, Females 193.
Total Births	372
Birth rate per 1,000 of Fixed Civil Population	23
Deaths in Civil Population	Males 128, Females 128.
Crude death rate per 1,000 of Total Civil Population	14·80
Average crude death rate for previous 10 years...	17·13
Standardised death rate corrected for age and sex distribution	17·41 per 1,000
Death rate from principal acute infectious diseases in Total Civil Population ...	·62 per 1,000
Death rate from Pulmonary Tuberculosis ...	1·7 per 1,000

The marriage rate was 8·1 per 1,000 as compared with 10·3 per 1,000 in 1924.

The birth rate in 1925 was 23 per 1,000, this being ·75 per 1,000 above that of 1924.

The death rate in 1925 was 14·80 per 1,000, being ·14 per 1,000 above that of the preceding year.

The infantile mortality was 83 per 1,000 births, being 8·6 per 1,000 below the rate for 1924.

The mortality in infancy will be found examined in detail under another heading.

GENERAL CONSIDERATION.

Gibraltar is a narrow peninsular running North and South. It consists of a high mountain called the "Rock" and of a flat sandy plain known as the North Front; the Neutral Territory connects it with Spain.

The Rock is of limestone formation, overlaid on the West with dark shale and covered with a layer of more recent geological formation in parts of limestone breccia or angular limestone blocks, in parts of sandstone or sand.

It is 1,396 feet above the sea level at its highest point, and some 2½ miles long. The North Front plain is about ½ mile in length and some 10 feet above the sea level.

The total acreage of Gibraltar territory is 1,387 acres, 2 roods and 3 poles or about 2⅙ sq. miles.

The town proper or City of Gibraltar occupies an area some ¾ of a mile in length of 104 acres, 3 roods, 33 poles at the foot of the Rock on its lower North-Western slope.

The Neutral territory is an isthmus of some 1,500 yards long and from 1,000 to 1,800 yards wide through which runs the main road to Spain.

The Spanish city of La Linea is situated at the North of the neutral territory and immediately adjoining it.

The only civil habitations on the East side of the Rock are at Catalan Bay Village.

The rateable value of Gibraltar is £287,874-11-8 and a penny rate produces £1,142-13-2.

The Public Health Administration of Gibraltar is vested in the City Council and in the Board of Health.

The City Council are the authority for carrying out the provisions of the Public Health Ordinance relating to Water Supply, Sewerage, Prevention of Disease, General Sanitation of Gibraltar territory and the Vaccination Ordinance. The Board of Health deals with matters of sanitation arising in the port.

The Civil Hospital, Isolation Hospital, Midwives' Ordinance, Medical Work in connection with the Port, Schools, and Inspection of Foodstuffs are administered by the Colonial authorities.

METEOROLOGICAL OBSERVATIONS FOR THE YEAR 1925.

Latitude 36° 6′ N. Longitude 5° 21′ W.

Instruments verified at the National Physical Laboratory, Kew.

The Meteorological Station is situated in an obsolete bastion on the fortifications on the South-West side of the Rock, the height of the ground being 50 feet above mean sea level. Here all the instruments (except the anemometer) are kept.

The shade thermometers, kept in a Stevenson screen, are: one self-recording maximum, one self-recording minimum, a dry and wet bulb. A self-recording grass thermometer is used for registering the temperature on the grass.

The rain gauge is an 8 inch copper meteorological pattern.

The anemometer is fixed in Victoria Gardens, North Front, on the isthmus which joins Gibraltar to the mainland, and clear of the Rock to avoid eddies.

A report is sent twice daily to the Meteorological Office, London, and daily to the *Gibraltar Chronicle* for general information. A complete monthly report is also sent to the Meteorological Office, London, for publication in their journals.

The report contains statistics showing the means for the year in barometric pressure, air temperature, rainfall, humidity, cloud and wind, compared with the averages for a series of years, number of days of clear sky, overcast days, and days on which rain fell during the year. Readings are taken every day throughout the year at the 7th, 13th, 18th, and 21st hour, but the following tables are compiled from the readings at the 7th, 13th, and 21st hours only.

NOTABLE FEATURES OF THE WEATHER OF 1925.

JANUARY was fine, warm and unusually dry. The rainfall 0·11 ins. being 4·90 ins. below the average, and the temperature 1·5 above, with mostly moderate easterly winds, only four overcast days were recorded, and the barometer readings were the highest of the year.

FEBRUARY was normal in temperature and rainfall, with twelve overcast days, and light westerly winds.

MARCH. The rainfall was 1·20 ins. above the average, though there were only the usual number of wet days. The temperature was rather low, with moderate to high east winds. The worst storm of the year was experienced from the east during the 13th, 14th, and 15th, with frequent gusts of gale force over a period of 50 hours.

APRIL was also unusually dry with but one day on which rain fell. The total fall for the month being only 0·04 ins., there was sunshine every day and mostly light westerly winds.

MAY. No rain fell during the first eighteen days, the total for the month being 1·50 ins. below the average temperature slightly below normal, no overcast days.

JUNE. The weather in June was unusual. The rainfall being 1·44 ins. or 1 inch over the normal, with five thunderstorms. The temperature was 2° below the average.

JULY not so hot as usual, the temperature being 3° below the average, there were three thunderstorms and 0·21 ins. rainfall, with much fog at sea.

AUGUST was the hottest month, though not above normal, there were 14 overcast days, owing to the "Levanter" which was more persistent even than usual.

SEPTEMBER. This year again unusually dry, no rain being recorded, the prevailing winds were from the east.

OCTOBER was warm, with much less than the usual rainfall, there being only four wet days, and light winds.

NOVEMBER was noted for the excessive rainfall, 19·72 ins., which had not been equalled for many years, there were mostly westerly winds, and the temperature was 2° below the average.

DECEMBER. The temperature was 3° and rainfall 1·20 ins. above normal, with light to moderate winds, except on the 20th, when a gale with heavy seas was experienced from the S.W.

Rainfall—Rain season 1924-25	21·74 inches.
For the year 1925	39·24 inches.
Number of days on which ·01 inch of rain or more fell	75
Number of days on which ·04 inch of rain or more fell	59
Highest recorded temperature in screen ...	89 on 10th, 17th August.
Lowest recorded temperature in screen ...	41 on 1st, 2nd, 23rd March.
Mean temperature for the year	63° ·7
Mean humidity	74%
Lowest temperature on the grass	33 on the 23rd March.
Wettest day	5·02 inches on 26th November

Mean amount of cloud for the year	5·1
Number of days of clear sky	59
Number of days of overcast sky	72
Number of thunderstorms	15
Number of occasions when hail fell	3
Number of gales (including gale gusts) ...	5
Number of days of fog	6
Number of frosts...	0

BAROMETER—The mean Barometric reading for the year was 30·072 inches, when reduced to sea level and to a temperature of 32° Fahr. The highest corrected monthly mean being January—30·411 inches and the lowest November—29·966 inches.

TEMPERATURE—The mean temperature for the year was 63° ·7, which was 0·4 below the normal for 40 years, the months of January, October and December alone being above the average.

WIND—From three observations daily during the year the direction of the winds prevailing show the frequency of the winds from the westerly points (see reference table) though as taking due West against due East, East predominated with 303 observations against West, 175. There were again unusual number of calms, the proportion being 152 out of 1095 observations. The wind consisted mostly of light to moderate breezes, there were 5 occasions when gale gusts were experienced.

RAINFALL—One inch of rain equals 22,622 gallons per acre, which is equivalent to 101 tons of water per acre. The rainfall for the year was 39·24 inches equivalent to 997 millimeters which amount is 3·57 inches above the average for 40 years. The months in which the rainfall exceeded the average were March, June, July, November and December. The month of November was by far the wettest with 19·72 inches. The heaviest fall for one day being 5·02 inches on the 26th November. There was one month, *e.g.*, September, in which no rain was recorded, though the fall for January and April was extremely small.

HUMIDITY—The mean relative humidity of the atmosphere (percentage of saturation of the air) was normal for the year. As will be seen by the reference table the average humidity is fairly heavy, though considerable variations occur, sometimes as much as 68%.

These details and comparative tables of the Meteorology of Gibraltar are given in the Annual Meteorological Report of Gibraltar by Mr. Henry Bentley, Public Works Department, Meteorological Observer.

TABLE I.

Month	Barometric pressure reduced to sea level and 32° fahr.	Maximum and Minimum Temperatures.			Difference from average for 40 years.	Maximum and date.	Minimum and date.
		Maximum	Minimum	Mean.			
Jan.	30·411	60·4	52·5	56·5	+ 1·6	63—2nd 27th 28th	43—2nd
Feb	30·161	60·8	49 8	55·3	— 0·6	65—11th	44—22nd
Mar.	29 973	58·9	48 9	53 9	— 3·8	67—9th	41—1st 2nd 22nd
April	30·067	67 7	53·1	60·4	— 0·6	75—16th 17th 27th	46—1st
May	30 049	71·3	57 3	64·3	— 1 4	77—28th	53—17th 18th 19th
June	29·985	74·4	62·1	68 3	— 1·9	83—28th	53—3rd
July	30·027	78·7	64 8	71·7	— 3·2	87—24th	60—6th
Aug.	30 024	82·5	69 0	75·7	— 0·2	89—10th 17th	64—25th
Sept.	30 031	77 9	66·3	72 1	— 0·6	85—29th	57—26th
Oct.	30 039	73 0	62·0	67 5	+ 1·4	79—8th	53—27th 29th
Nov.	29·966	63·7	53 7	58·7	— 1·9	76—5th	45—15th
Dec.	30 135	63 8	55·8	59·8	+ 3·3	69—10th 31st	44—2nd
Year..	30·072	69 4	57·9	63·7	— 0 4	89—10th 17th August	41—1st 2nd 23rd March

TABLE II.

Month.	Shade Temperature.			Humidity.		
	7th hour.	13th hour.	21st hour.	7th hour.	13th hour.	21st hour.
January ..	53·4	59·2	55·2	78	67	77
February...	50·9	59·3	53 9	83	63	78
March	50 6	56·7	53·2	78	66	75
April	54·5	65 6	58·3	81	56	76
May	59 7	68·2	61·7	74	57	73
June	63·7	71·9	66 0	82	65	76
July.....	66 8	75 7	69·4	78	58	73
August ..	71·0	78·0	73·1	76	61	72
September	67 7	74·8	69 7	80	65	78
October	63 2	70·8	65 4	84	67	82
November.	55·2	62 2	57 6	83	69	79
December..	57 0	62·3	59 4	86	75	82
Year	58 8	67·1	61 9	80	64	77

TABLE III.

Month.	Terrestrial Radiation.			Solar Radiation.		
	Temperature on the grass.			Black bulb in vacuum.		
	Mean	Min.	Date.	Mean.	Max.	Date.
January ...	47·6	35	2nd	96	123	21st
February...	44·4	37	21st	105	118	15th 16th
March	44·2	33	23rd	92	122	9th
April.....	47 9	40	1st	119	127	17th 30th
May.....	53·3	47	12th	120	134	28th
June.....	59·2	51	6th	113	133	23rd
July.....	62·2	55	4th	124	136	30th
August. ...	66·2	59	25th	122	140	17th
September	63 3	51	24th	117	136	22nd
October	59 0	48	27th 29th	111	126	8th 15th
November..	49·6	38	30th	95	125	5th
December..	52·0	38	1st 2nd	92	118	11th
Year	54·1	33	23rd March	109	140	17th August

TABLE IV.

Month.	Cloud amount 0-10.			Clear sky days.	Overcast days.
	7th hour.	13th hour.	21st hour.	less than 0·2 cloud.	More than 0·8 cloud.
January ...	6·7	5·7	4·4	3	4
February...	5·3	4·7	4·1	5	2
March	5·4	6·4	4·0	6	8
April.....	3 4	4·2	2·0	7	0
May.....	3 6	4·2	2·0	8	0
June.....	6·0	5·0	4 6	5	4
July.....	5 4	4·5	3·7	7	8
August ..	6 8	5·6	5 6	7	14
September	6 1	5·2	4 8	4	3
October ...	5·6	5 7	5·3	2	6
November	6 3	6 0	5·1	2	11
December..	7·5	7·2	6·5	3	12
Year	5·7	5·4	4·3	59	72

TABLE V.

Month.	Rainfall.		Greatest fall in 24 hours beginning at 7 a.m. inches.	Number of days with 0·01 inches or more.	Number of days with 0·04 inches or more.	Rain Season. 1924-25	
	Total fall inches.	Deviation from average for 40 years.				Month.	Total fall inches.
Jan.	0·13	—4 96	0·09 on 25th	3	1	Aug. ...	0·09
Feb	3·15	—1 07	1·54 „ 14th	14	12	Sept. ...	—
March ...	5·93	+1·15	2·83 „ 1st	10	7	Oct. ...	1·60
April ...	0·04	—2·55	0·04 „ 6th	1	1	Nov ...	6·36
May.....	0 32	—1·42	0·17 „ 17th	2	2	Dec. ...	2·47
June	1·44	+0·99	1·07 „ 3rd	4	4	Jan. ...	0·13
July	0·21	+0·16	0 21 „ 15th	1	1	Feb. ...	3·15
August...	0·05	—0·08	0·03 „ 12th	2	—	Mar. ...	5·93
Sept. ...	—	—1·38	—	—	—	April ...	0·04
October..	1·34	—1 97	0 76 on 23rd	9	4	May ...	0·32
Nov.....	19 72	+13 36	5·02 „ 26th	14	14	June ..	1·44
Dec.....	6·91	+1·34	1 92 „ 21st	15	13	July ...	0·21
Year	39·24	+3·57	5·02 on 26th November	75	59	Rain Year	21·74

N.B —In Gibraltar the fall of rain is calculated for the rain year which commences with the first rainfall after July and terminates the day before the first rain recorded after July the following year.

The rain year 1924-25 commenced on the 8th August, 1924, and ended on the 12th August, 1925.

TABLE VI.

Month.	Winds obs. at 7-13-21 hr. 1095=year.								Calm.	Force 1 to 3	Force 4 to 7	Force 8 or more.
	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.				
January ..	—	6	48	11	3	1	4	6	14	38	41	—
February..	1	1	10	12	1	14	15	21	9	50	25	—
March	2	3	45	8	1	6	11	11	6	46	41	—
April.....	—	2	6	4	3	15	28	23	9	62	19	—
May	—	—	15	4	2	23	31	14	4	72	17	—
June	—	—	20	1	5	17	24	12	11	73	6	—
July	—	1	21	11	5	24	12	7	12	75	6	—
August ..	—	1	33	13	1	27	7	2	9	77	7	—
September.	—	3	32	14	1	8	9	5	18	64	8	—
October ..	—	2	26	4	4	15	10	11	21	63	9	—
November ..	2	—	25	1	2	8	12	18	22	45	23	—
December..	1	—	22	4	4	26	12	7	17	50	26	—
Year	6	19	303	87	32	184	175	137	152	715	228	—

VITAL STATISTICS.

An estimate by the Police Authorities at the end of 1925 forms the basis on which the various rates connected with the vital statistics have been calculated in this report.

Data concerning the Naval and Military population are not included in these figures.

1. POPULATION.

The total Civil population is estimated at 17,288 persons of which 16,019 are British subjects other than Maltese, 108 British subjects born in Malta, 180 alien residents in the Bay, and 981 aliens resident in the Town.

The following table shews the fluctuation in population of Gibraltar during recent years :—

	British Subjects Fixed Population.	Alien Subjects Floating Population.	Total Population.
Census April 1911	17,021	2,565	19,586
Police Estimate at end of 1913	16,147	2,301	18,448
Police Estimate at end of 1914	16,086	1,950	18,036
Police Estimate at end of 1915	16,163	1,780	17,943
Police Estimate at end of 1916	16,499	1,947	18,446
Police Estimate at end of 1917	16,549	1,977	18,526
Police Estimate at end of 1918	16,096	1,867	17,963
Police Estimate at end of 1919	16,040	1,733	17,773
Police Estimate at end of 1920	16,181	1,509	17,690
Census June 1921	16,753	1,787	18,540
Police Estimate at end of 1922	16,182	1,145	17,327
Police Estimate at end of 1923	16,165	1,181	17,346
Police Estimate at end of 1924	16,177	1,147	17,324
Police Estimate at end of 1925	16,127	1,161	17,288

VITAL STATISTICS DURING 1925 AND PREVIOUS YEARS.

Year	Estimated Total Population.	Estimated Fixed Population.	How Estimated.	Births.		Deaths.		Crude death rate per 1,000 of Total Civil Population.	Crude death rate per 1,000 of Fixed Civil Population.	Deaths.	
				Number.	Crude rate per 1,000 of Fixed Civil Population.	Total.	Fixed Civil Population.			Under one year.	
										Number.	Rate per 1,000 births.
1913	18,448	16,147	By Police Census at end of year.	386	23·9	269	253	14·58	15·67	29	75 12
1914	18,033	16,086		387	24·4	270	225	14·97	13·68	36	93 02
1915	17,943	16,163		366	22·64	298	271	16·6	16·7	33	90·16
1916	18,446	16,449		340	20·61	284	276	15·39	16·73	42	123·52
1917	18,526	16,549		370	22·35	293	272	15·81	16·43	42	113·51
1918	17,963	16,096		394	24·47	400	386	22·26	23·22	49	124·5
1919	17,773	16,049		399	24·9	318	308	17·89	19·20	43	107·77
1920	17,690	16,181		375	23·2	308	297	17 45	18·72	48	128·00
1921	18,540	16,733	Census June '21	429	25·6	292	282	16·83	15·74	44	102·5
1922	17,327	16,182	Police Census at end of year	366	22 67	304	298	17·54	18·40	38	103·8
1923	17,346	16,165		365	22·57	294	285	16 95	17·63	40	109·5
1924	17,324	16,177		360	22 25	298	254	14 66	15·45	33	91 6
1925	17,288	16,127		372	23	292	256	14 80	15·44	31	83 3

Total area of City and Territory of Gibraltar, 1387 acres, 2 roods, 3 poles.

These figures represent the population of Gibraltar between the hours of 10 p.m. and 5·30 a.m. To calculate the daily population it will be necessary to add some 5,000 aliens and 1,500 British subjects resident in La Linea who come into Gibraltar daily.

The age and sex distribution of the population of Gibraltar is as follows :—

	Persons of ten years of age and over.		Persons under 10 years of age.	
	Males.	Females.	Males.	Females.
British Subjects	5,367	6,222	2,276	2,154
Maltese	86	22		
Aliens in the Bay	180			
Aliens in the Town	286	695		
Totals	5,919	6,939	2,276	2,154

Total Males 8,195; Females 9,093.

2. DEATHS.

The number of deaths registered for the Civil population of Gibraltar during the year was 256, in addition to 36 persons who died after being landed from the Bay or brought into the Town for treatment.

Two hundred and forty-nine deaths occurred amongst British subjects, and seven amongst resident aliens.

The crude death rate per 1,000 of the fixed population is 15·44, that of the total population 14·80.

The standardised death rate of the total population, obtained by multiplying the crude death rate by the factor 1·177 is 17·41 per 1,000.

The following table shews the crude death rate for the past 10 years :—

Year	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925
Fixed Population	16·73	16·43	23 98	19·20	18·72	15·74	18·10	17·63	15·45	15·44
Total Population	15·39	15·81	22·26	17·89	17·45	16·83	17·54	16·95	14·66	14·80

3. MONTHLY AND QUARTERLY MORTALITY.

The highest number of deaths occurred in December; the lowest in June.

The death rate during the fourth quarter of the year was the highest, and that of the second the lowest.

The number of deaths registered each month was as follows:—

January..... 18	April..... 18	July..... 16	October..... 25
February ... 27	May 26	August 23	November... 30
March 31	June..... 15	September... 25	December ... 38
—	—	—	—
76	59	64	93
—	—	—	—

These figures include cases landed from ships in the Bay or brought into the Town for treatment.

Causes of death in Civil population in 1925 according to the International Abbreviated List, with Age and Sex incidence.

Causes of Death.	All Ages	Under 1 year.		1 year and under 2.		2 years and under 5.		5 years and under 15.		15 years and under 25.		25 years and under 45.		45 years and under 65.		65 years and over.		Deaths in Institutions.
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
1. Enteric Fever	3	—	—	—	—	—	—	—	—	1	—	1	1	—	—	—	—	1
9. Influenza	3	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	2	—
12. Other epidemic diseases...	1	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	1
13. Phthisis (Pulmonary Tuberculosis)	30	—	—	—	—	—	—	—	1	3	4	11	2	8	1	—	—	6
14. Tuberculous Meningitis ..	3	1	—	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—
15. Other Tuberculous diseases	2	—	—	—	—	—	—	1	1	—	—	—	—	—	—	—	—	—
16. Cancer, Malignant disease	17	—	—	—	—	—	—	—	—	—	—	3	1	5	3	2	3	5
17. Meningitis	4	1	—	—	2	—	—	—	1	—	—	—	—	—	—	—	—	—
18. Cerebral Hæmorrhage and Softening	12	—	—	—	—	—	—	—	—	—	—	—	1	4	2	2	3	2
19. Organic Heart Disease ...	29	2	—	—	—	—	—	—	—	—	1	2	2	7	4	—	11	7
20. Acute Bronchitis	3	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—
21. Chronic Bronchitis ...	10	—	—	—	—	—	—	—	—	—	—	1	—	3	1	2	3	4
22. Pneumonia	19	1	5	2	1	1	1	—	1	—	—	—	1	4	—	1	1	3
23. Other diseases of respiratory system ...	2	—	—	—	—	—	1	—	—	—	—	—	—	—	—	1	—	1
25. Diarrhœa and Enteritis (under 2 years)	7	2	4	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
26. Appendicitis & Typhlitis	2	—	—	—	—	—	—	—	—	—	1	1	—	—	—	—	—	2
27. Hernia Intestinal obstruction	3	—	—	—	—	—	—	—	—	—	—	1	1	—	1	—	—	2
28. Cirrhosis of Liver... ..	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—
29. Acute Nephritis and Bright's Disease ...	9	—	—	—	1	—	—	—	—	—	—	—	—	3	1	2	2	2
32 Other accidents and diseases of pregnancy and parturition ...	1	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—
33. Congenital Debility and Malformation (including premature birth)...	9	7	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
34. Senility	28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6	22	13
35. Violent Death (excluding Suicides)	4	—	—	—	—	1	—	—	1	—	—	2	—	—	—	—	—	2
36. Suicides	2	—	—	—	—	—	—	—	—	1	—	—	—	1	—	—	—	—
37. Other defined diseases ...	51	2	1	—	—	1	—	2	—	1	6	5	2	9	5	5	12	21
38. Diseases ill-defined or unknown	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Totals	256	18	13	4	4	3	2	4	6	6	12	27	12	44	19	22	60	74

4. BIRTHS.

The birth rate for the year amounted to 23 per 1,000 of the fixed population, as compared with 22·25 for the previous year.

The number of births registered was 372; of these 179 were males and 193 females.

No births were recorded among the alien population.

The following is the birth rate of Gibraltar compared with that of England and Wales:—

Year.....	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925
England and Wales	20·9	17·7	17·7	18·5	25·4	22·4	20·6	19·7	18·8	18·3
Gibraltar...	20·6	22·3	24·4	24·9	23·2	25·6	22·6	22·5	22·2	23

MATERNITY AND CHILD WELFARE.

STATISTICS.

The number of children born during the year 1925 was 372, and the birth rate was 23.

Of the 372 births 179 were males and 193 females.

The number of infant deaths was 31; of these 18 were males and 13 females.

During the past five years the infant mortality has dropped from 128 per 1,000 in 1920 to 83 per 1,000 in 1925.

The infantile mortality rate of 83 per 1,000 is the lowest since 1913.

The means adopted in Gibraltar with a view to bringing about a reduction in infant mortality and generally improving the life and health of infants and children, during the past few years include:—

(*a*) The provision of a Child Welfare Centre which was started in 1918 and is now well attended and doing excellent work.

(*b*) The provision of a "Maternity Ward" at the Colonial Hospital in 1921, which has proved to be of the greatest benefit to Gibraltar.

(*c*) The provision of a "Children's Ward" at the Colonial Hospital in 1922, which has filled a long felt want, and has been of the greatest value.

(*d*) The provision in 1918 of a Nurse for home visiting, so that some supervision may be kept over the children at home, and advice given as to care and feeding.

There is every reason to be gratified with the results of these efforts, and the marked decline in the infant mortality rate in recent years can be regarded as most satisfactory.

Undoubtedly voluntary charitable organisations and the Destitute Sick and Tuberculosis Scheme have played an important part in the reduction of infantile mortality in Gibraltar.

Education has also helped largely in obtaining this low infantile mortality rate ; people are now better able to appreciate health questions, and their assistance and support can be more easily obtained to measures considered beneficial than was formerly the case.

For the future reduction of infant mortality it is obvious that better housing must play a great part. At the present time overcrowding in Gibraltar is an influence which operates against the health of both mothers and children, and undoubtedly contributes to the infant death rate. Cases exist where expectant mothers are living and sleeping in one small room with the husband and several children. In some cases more than one family occupy the room. In addition to the existence of pregnancy these circumstances are sometimes made worse by the complication of a consumptive member of the family occupying the same room. Fortunately the Maternity Ward at the Colonial Hospital is now available for confinements in such cases, but for several months preceding this event conditions are extremely bad for all concerned.

CAUSES.

So far as age and causation are concerned conditions vary very little year by year. During 1925 there were 9 deaths under 4 weeks, and 22 deaths from 4 weeks to 12 months. There appears to be no undue proportion occurring in the early weeks of life. The outstanding causes of death and the numbers traceable to them were those usually occurring.

Enteritis has accounted for 6 deaths out of a total of 31, or 19·39 per cent.

Atrophy, Debility and Marasmus have been the cause of 8 deaths during the year (and with Premature Birth of 1) or 29 per cent. of the total infantile deaths.

Bronchitis and Pneumonia have accounted for 8 deaths, or 25·8 per cent. of the total number.

Meningitis and Convulsions have accounted for 4 deaths, or 12·9 per cent. of the total.

The following table shews the infantile mortality for the United Kingdom and Gibraltar:—

INFANTILE MORTALITY PER 1,000 BIRTHS, 1910—1925.

Year	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925
England and Wales ...	105	130	95	108	105	110	91	96	97	89	80	83	77	69	75	75
Gibraltar	135	119	78	75	93	90	123	113	124	108	128	102	103	109	91	83

MIDWIVES.

There are six names on the Register of Midwives under "The Midwives Ordinance, 1907."

None of these are trained nurses.

The actual number who took cases during 1925 was 5.

The number of mothers attended in childbirth by registered midwives was 251 or 67·4 per cent. of the total births. The number attended by unregistered midwives was 4.

Over 68 per cent. of the confinements during 1925 were attended without the assistance of a medical man. This throws a great responsibility on the midwives attending and emphasises the need of properly certified midwives.

In three instances midwives summoned medical help which was paid for out of Colonial funds.

Sixty-nine expectant mothers had their confinements paid out of Colonial Government funds.

Periodical inspections of midwives are carried out in accordance with "The Midwives' Ordinance, 1907." On the whole the bags, &c., are well kept.

PUERPERAL SEPSIS.

One case of this disease was notified during the year. The patient was treated at home and recovered.

One midwife was suspended from practice under the Rules made under "The Midwives' Ordinance, 1907," and has since retired from practice.

CASE INCIDENCE AND MORTALITY FROM PUERPERAL FEVER, 1921—1925.

	1921	1922	1923	1924	1925
Cases	2	3	5	2	1
Deaths	2	1	—	1	—

*MATERNITY WARD—COLONIAL HOSPITAL.

The Maternity Ward has had 75 patients as compared with 48 in 1924 and 22 in 1923. The number of births was 50, the discrepancy in the figures 50 and 75 being due to two factors —the determination of the expectant mothers to have their children born in hospital and their consequent attendance whenever they thought labour was near, and the necessity of treating diseases of pregnancy in the Maternity Department owing to want of accommodation in the general ward. On many occasions extra beds have had to be put up in the ward.

*CHILDREN'S WARD—COLONIAL HOSPITAL.

The Children's Ward has maintained its usefulness. The total number treated was slightly less, 164 compared with 177, but the maximum daily number was 19, or 2 more than last year, and the daily average 16 as against 15. At times the work was so hard and trying as to affect the health of the nurses, and it was thought advisable to arrange that each of the Staff Nurses should in turn take duty with the children. In addition the ward staff has been relieved of some of its work, a laundress being sent to wash for an hour each day. It has again been found that the in-treatment of children retains the confidence of the local population.

*Taken from the Annual Medical Report for the year 1925.

WELFARE CENTRE.

The Centre is situated in the City Hall (Public Health Department) and is opened on Thursday afternoons on alternate weeks. The average number of mothers bringing their children is 60.

The following is the amount of milk, Virol, and other food preparations distributed during the year, either free or at half cost, to nursing mothers and infants under 2 years of age:—

Milk	2666 tins
Malted Glaxo	66 „
Glaxo...	100 „
Virol	66 pots
Feeders	49

During the year the trained nurse has paid 186 visits to homes of children, this keeping them under constant observation.

The distribution of infant clothing by the Gibraltar Needlework Guild has been of the greatest assistance for mothers in poor circumstances.

Infantile Mortality, 1925.

Cause of Death.	Under 1 week.		1—2 weeks.		2—3 weeks.		3—4 weeks.		Total under 4 weeks.	4 weeks and under 3 months.		3 months and under 6 months.		6 months and under 9 months.		9 months and under 12 months.		Total deaths under 1 year.
	M	F	M	F	M	F	M	F		M	F	M	F	M	F	M	F	
Pneumonia	—	—	—	—	—	—	—	—	—	—	—	—	2	1	2	—	1	6
Atrophy, Debility & Marasmus	—	—	—	—	1	1	1	—	3	3	1	1	—	—	—	—	—	8
Acute Bronchitis	—	—	—	—	—	1	—	—	1	1	—	—	—	—	—	—	—	2
Heart Disease	1	—	—	—	1	—	—	—	2	—	—	—	—	—	—	—	—	2
Meningitis	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	1	—	2
Convulsions	—	—	1	—	—	—	—	—	1	—	—	—	—	1	—	—	—	2
Asphyxia	—	1	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	1
Diarrhœa and Enteritis ...	—	—	—	—	—	—	—	—	—	—	2	—	—	1	1	1	1	6
Premature Birth	—	—	—	—	1	—	—	—	1	—	—	—	—	—	—	—	—	1
Other causes	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1
Totals	1	1	1	—	3	2	1	—	9	4	3	3	2	3	3	2	2	31

The following detailed statement shews the number and causes of death under 1 year, 1913-1925 :—

Cause of Death.	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	Total
Meningitis	4	3	4	2	3	3	2	3	1	2	1	4	2	34
Convulsions	3	1	1	4	2	4	—	—	1	—	1	1	2	20
Bronchitis	—	1	1	1	—	1	2	2	1	1	1	—	2	13
Pneumonia	—	2	2	1	7	8	5	1	5	6	3	8	6	54
Diarrhœa and Enteritis	9	13	7	12	8	3	18	13	11	15	10	5	6	130
Syphilis	—	1	—	—	—	1	—	1	2	—	—	1	—	6
Atelectasis	—	1	1	1	2	2	—	1	—	—	—	—	—	8
Premature Birth	2	3	10	3	6	1	9	10	5	3	7	—	1	60
Atrophy, Debility and Marasmus	5	6	4	14	13	19	5	14	11	7	5	12	8	123
Diphtheria	—	—	1	—	—	—	—	—	—	—	—	—	—	1
Measles	—	—	—	1	—	—	—	—	3	1	—	—	—	5
Nephritis	—	—	—	1	—	—	—	—	2	—	—	—	—	3
Whooping Cough	2	—	—	—	1	—	—	—	—	2	6	—	—	11
Diseases of Heart	2	—	—	1	—	1	—	—	—	—	—	—	2	6
Intestinal Obstruction	1	1	1	—	—	1	—	—	—	—	—	—	—	4
Septicæmia	—	1	—	—	—	—	1	—	—	—	1	—	—	3
Suppression of Urine	—	1	—	—	—	—	—	—	—	—	—	—	—	1
Hæmorrhage	—	—	1	—	—	1	—	—	—	—	1	1	—	4
Dentition	—	—	—	1	—	1	—	1	—	—	—	—	—	3
Rickets	—	—	—	—	—	2	—	—	—	—	—	—	—	2
Starvation	—	—	—	—	—	1	—	—	—	—	—	—	—	1
Influenza	—	—	—	—	—	—	1	1	—	—	—	—	—	2
Suffocation	—	—	—	—	—	—	—	1	—	1	—	1	—	3
Other causes	1	2	—	—	—	—	—	—	2	—	4	—	2	11
Totals	29	36	33	42	42	49	43	48	44	38	40	33	31	508

MEDICAL INSPECTION OF SCHOOL CHILDREN.

Extract from the Medical Report by Surgeon, Colonial Hospital.—

The existing arrangement for the Medical inspection of school children attending the Government-aided schools has been continued in the past twelve months by the School Nurse and the Assistant Surgeons of the Hospital. In the months of September and October, 1925, owing to shortage of nursing staff in the Colonial Hospital only four schools could be visited by the nurse, and in March for the same reason only six schools instead of ten were visited. In each of the remaining complete months of school work all the schools were visited.

The statistics show that a more searching inspection for minor ailments has been carried out. As compared with 367 in 1924-25, no fewer than 975 children were recommended to attend the Hospital for medical advice—an abnormally large percentage of the total number of school-children. Of these 761 actually attended—78 per cent. as against 60 per cent. in the preceding twelve months. It is gratifying to record this improvement in so far as it indicates a higher appreciation of the efforts of the School Nurse. At the same time it has to be kept in mind that as a number of the children who do not attend at the Hospital are instead treated by town practitioners, an increased percentage attendance at the Hospital may be partly due to the greater inability of parents to call in private doctors.

The general statistics are as follows:—

A. Diseases of the Eye and Defects of Vision ...	63
B. Skin Diseases	345
C. Other Diseases	571

Of class A. 11 were provided with spectacles free of cost. Many repairs to glasses previously provided were also carried out. Of class B. 32 suffered from scabies, 262 from impetigo and septic sores, 42 from contagious warts, 5 from ringworm, and 4 from specially "dirty heads." Of class C. a large group, debility and anæmia accounted for 106. The remainder consisted of various ailments such as nasal discharge, enlarged tonsils, adenoids, and colds.

A School Dentist was appointed in July 1925. The children are recommended to him by the School Nurse, the Medical Officers or the teachers, and they attend at his consulting rooms outside school hours—Tuesday and Friday evenings

and Saturday mornings—so as not to interfere with their attendance in class. At the end of each month the dentist sends a report through the Surgeon, Colonial Hospital, to the Inspector of Schools.

The school dentist who has been appointed is Mr. John Garesse. He has devoted much time to the school work, and has in addition voluntarily lectured in Spanish to the children on the care of the mouth and teeth. These lectures he is willing and anxious to continue should they be considered by the Education Authority to be of value. The medical point of view can be stated in a few words: Neglect of dental hygiene in the civilised peoples of the present day is accountable for a very large proportion of chronic ill-health. School dental work should include as its more important part the prevention of dental caries and pyorrhœa in addition to curative measures, and I strongly recommend that Mr. Garesse's offer of instruction should be accepted.

The dental statistics show that a large amount of work has been done, and are already sufficiently remarkable to prove the value of the appointment. In one respect they are specially noteworthy—the proportion of fillings to extractions is abnormally low. This is natural at the beginning of dental supervision, but improvement is to be looked for when the children by education are induced to attend at an earlier stage, and the teeth both permanent and temporary are still in a condition to be filled. It is for this conservative treatment that I have all along advocated the appointment of a school dentist. It only remains for the parents to take advantage of the opportunity afforded by the Government to their children.

PREVALENCE AND CONTROL OF INFECTIOUS DISEASES.

The following infectious diseases are notifiable in Gibraltar in accordance with the provisions of "The Public Health Ordinance, 1907":—

Venereal Diseases	Ophthalmia Neonatorum
Plague	Encephalitis Lethargica
Pneumonia	Influenzal Pneumonia
Small Pox	Chicken Pox
Cholera	Yellow Fever
Diphtheria	Erysipelas
Measles	Poliomyelitis
Membranous Croup	Acute Dysentery
Pulmonary Tuberculosis	Scarlet Fever
Cerebro-Spinal Fever	Acute Epidemic Gastro-Enteritis
Typhus Fever	Enteric Fever
Relapsing Fever	Puerperal Fever
Undulant Fever	*Influenza

Laboratory work connected with notifiable diseases is done free of charge at the City Council Laboratories for residents of Gibraltar and Gibraltarians resident in the neighbourhood.

GENERAL INCIDENCE.

The number of cases of infectious disease notified during the year, exclusive of Naval and Military cases, was 1,264, of which 900 were Influenza, 122 Pneumonia, and 70 Chicken Pox.

Ten deaths were attributed to one or other of the eight principal acute infectious diseases, seven of these being due to Diarrhœa and Enteritis in children under two years of age, and three to Enteric Fever, equivalent to a zymotic death rate of ·62 per 1,000.

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*Removed from the list of notifiable diseases in November, 1925, and Influenzal Pneumonia substituted therefor.

QUARTERLY INCIDENCE OF NOTIFIABLE INFECTIOUS DISEASES.
CIVIL POPULATION.

Disease	1st Qr.	2nd Qr.	3rd Qr.	4th Qr.	Total	Deaths
Influenza	532	326	23	19	900	3
Pneumonia	67	34	8	13	122	19
Scarlet Fever	3	1	1	—	5	—
Chicken Pox	16	29	9	16	70	—
Diphtheria	8	8	6	9	31	—
Erysipelas	6	3	5	5	19	—
Venereal Diseases	5	3	7	6	21	—
Pulmonary Tuberculosis	8	11	7	2	28	30
Measles	9	4	3	2	18	—
Rubella	5	—	—	—	5	—
Ophthalmia Neonatorum	—	1	1	—	2	—
Undulant Fever	—	1	3	—	4	—
Enteric Fever	—	4	5	2	11	3
Gastro Enteritis	—	6	7	3	16	7
Puerperal Fever	—	1	—	—	1	—
Dysentery	—	1	6	3	10	—
Paratyphoid Fever	—	—	1	—	1	—
Encephalitis Lethargica	—	—	—	—	—	1
Totals	659	433	92	80	1,264	63

QUARTERLY INCIDENCE OF NOTIFIABLE INFECTIOUS DISEASES.
CASES LANDED FROM THE BAY OR BROUGHT INTO THE TOWN FOR TREATMENT.

Disease	1st Qr.	2nd Qr.	3rd Qr.	4th Qr.	Total	Deaths
Influenza	2	2	—	—	4	—
Enteric Fever	2	1	4	—	7	1
Chicken Pox	2	—	—	—	2	—
Small Pox	1	2	—	—	3	—
Membranous Croup	1	—	—	—	1	—
Diphtheria	—	—	1	1	2	—
Pneumonia	—	2	2	—	4	4
Pulmonary Tuberculosis	—	—	1	—	1	4
Paratyphoid Fever	—	—	1	1	2	—
Erysipelas	—	—	—	1	1	—
Gastro Enteritis	—	—	—	—	—	2
Totals	8	7	9	3	27	11

WEEKLY NOTIFICATION OF CASES OF INFECTIOUS DISEASE DURING 1925.

DISEASE	JANUARY				FEBRUARY				MARCH					APRIL				MAY				JUNE					JULY				AUGUST					SEPTEMBER				OCTOBER				NOVEMBER					DECEMBER					TOTAL
	5	12	19	26	2	9	16	23	2	9	16	23	30	6	13	20	27	4	11	18	25	1	8	15	22	29	6	13	20	27	3	10	17	24	31	7	14	21	28	5	12	19	26	2	9	16	23	30	7	14	21	28	31	
Influenza	3	12	19	11	37	31	45	41	43 2*	73	84	65	62	78	47	47	39	38 2*	18	25	16	9	4	4	5	—	2	6	—	—	1	—	1	1	2	2	—	1	9	3	1	6	7	2	—	—	—	—	—	—	—	—	—	900—4*
Pneumonia	—	2	2	3	7	8	13	9	1	7	7	3	4	4	—	1	1	3 2*	—	3	5	6	—	2	8	—	2	—	2 1*	—	—	—	—	—	1	2	—	1	2 1*	1	1	—	1	1	—	—	2	3	—	3	—	1	—	122—4*
Scarlet Fever	—	1	—	1	1	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5
Chicken Pox	—	2	—	6	—	—	—	—	2	1	1	2	2	2 2*	1	2	—	5	1	2	2	4	3	3	2	1	2	2	3	—	—	1	2	—	—	—	—	—	—	—	—	—	1	1	—	2	—	2	1	4	4	—	1	70—2*
Diphtheria	—	1	—	3	1	—	—	1	1	—	—	1	—	2	1	1	—	1	—		—	2	—	—	—	1		1	— 1*	1	—	2	—	—	2	—	—	—	—	—	1	—	—	3	—	1	1	2	—	1	—	—	—	31—2*
Erysipelas	—	—	1	1	—	2	-	—	1	—	—	—	1	—	—	1	—	—	—	—	—	—	—	—	1	—	1	—	—	1	—	—	—	—	—	—	1	1	2	—	—	1	—	—	—	—	—	1	1	1	—	1	—	19
Venereal Diseases	—	—	—	1	3	1	—	—	—	—	—	—	—	1	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	1	2	—	—	2	—	—	—	—	1	—	—	—	—	—	—	—	4	1	21
Pulmonary Tuberculosis ...	—	—	—	—	—	1	—	1	3	1	1	1	—	—	—	—	1	2	—	1	1	2	1	—	1	—	2	4	— 1*	—	—	—	1	—	1	—	—	1	—	—	—	1	—	—	—	—	1	—	—	—	—	1	—	28—1*
Measles	—	—	—	—	—	—	1	—	3	1	1	2	—	1	—	1	1	—	—	—	—	1	—	—	—	1	—	1	1	—	—	—	—	1	—	—	—	—	1	—	—	—	1	—	—	1	—	—	—	—	—	—	18
Rubella	—	—	—	—	—	—	—	2	2	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5
Enteric Fever	—	—	—	—	—	—	—	—	1*	—	—	—	—	1*	—	—	—	—		—	—	2 1*	1	—	—	—	2	1	— 1*	—	—	1	—	—	1	—	1	— 1*	1*	—	1	—	—	1	—	—	—	—	—	—	—	—	—	11—7*
Small Pox	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—3*
Membranous Croup	—	—	—	—		—	—	—	—	—	—	1*	—	— 1*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—1*
Ophthalmia Neonatorum ..	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
Undulant Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4
Gastro-Enteritis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	1	2	—	1	—	1	1	—	—	—	—	—	—	2	1	—	—	2	—	—	—	1	1	—	1	—	—	—	—	—	—	—	16
Dysentery...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	1	—	2	1	—	—	—	—	—	—	—	2	—	—	1	—	—	—	2	—	—	—	—	—	—	—	10
Puerperal Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Paratyphoid Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	1*	—	—	—	—	1*	—	—	—	—	—	—	—	—	—	—	—	1—2*
Totals... ..	3	18	22	26	49	43	59	54	56 3*	83	94	74 1*	70	90 4*	50	53	43	50 4*	19 2*	31	26	28 1*	11	9	19	3	13	17	9 4*	3	2	3 1*	8	3	10	7 1*	—	7	16 2*	7 2*	4 1*	7	13	9	1	7	3	8	2	9	4	7	2	1264—26

*Cases landed from the Bay or brought into the Town for treatment.

Age and Sex incidence of notifiable Infectious Diseases amongst Civil Population during 1925.

Notifiable Disease.	NUMBER OF CASES NOTIFIED.														Districts.			Total cases removed to Hospital	
	At all Ages	Under 1.		1 and under 5.		5 and under 15.		15 and under 25.		25 and under 45.		45 and under 65.		65 and Over.					
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	North.	Central.	South.	Residents.	Non-Residents.
Influenza	900	5	10	47	43	117	91	88	66	119	117	65	87	9	45	17	829	54	4	4
Pneumonia	122	10	7	28	24	13	11	3	1	7	6	4	4	2	2	2	114	6	11	4
Chicken Pox	70	3	4	8	15	15	20	1	1	2	1	—	—	—	—	1	56	13	2	2
Diphtheria	31	1	—	6	6	5	8	2	—	—	3	—	—	—	—	—	24	7	7	2
Erysipelas	19	—	—	1	—	—	2	1	2	1	4	—	5	2	1	—	18	1	2	1
Venereal Diseases...	21	—	—	—	—	—	—	8	—	10	—	3	—	—	—	—	17	4	—	—
Pulmonary Tuberculosis ...	28	—	—	—	—	—	—	2	1	11	1	9	3	—	1	1	25	2	9	1
Measles	18	—	1	3	3	7	1	—	3	—	—	—	—	—	—	—	16	2	2	—
Rubella	5	—	—	—	—	1	—	4	—	—	—	—	—	—	—	—	3	2	2	—
Scarlet Fever	5	—	—	1	1	2	1	—	—	—	—	—	—	—	—	—	5	—	—	—
Ophthalmia Neonatorum ..	2	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—
Undulant Fever	4	—	—	—	1	—	—	1	—	—	1	—	1	—	—	—	3	1	1	—
Gastro Enteritis	16	5	5	1	1	1	2	1	—	—	—	—	—	—	—	—	13	3	1	—
Enteric Fever	11	—	—	1	—	2	1	1	1	—	3	—	1	—	1	—	8	3	1	7
Dysentery	10	—	2	2	1	1	1	—	—	—	1	1	1	—	—	—	10	—	—	—
Puerperal Fever	1	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—	—	1
Paratyphoid Fever	1	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1	—	2
Totals	1264	24	31	98	95	164	138	112	75	142	138	82	102	13	50	21	1144	99	42	23

Monthly notification of notifiable Infectious Diseases.

Months.	Civil Population.																																	
	Influenza		Pneumonia		Scarlet Fever		Chicken Pox		Diphtheria		Erysipelas		Venereal Diseases		Pulmonary Tuberculosis		Measles		Rubella		Ophthalmia Neonatorum		Undulant Fever		Enteric Fever		Gastro Enteritis		Puerperal Fever.		Dysentery		Paratyphoid Fever	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
January	75	—	12	—	3	—	8	—	5	—	2	—	4	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
February	159	—	32	5	—	—	—	—	2	—	3	—	1	—	5	3	4	—	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
March	298	1	22	1	—	—	8	—	1	—	1	—	—	—	3	4	5	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
April	230	1	7	2	1	—	9	—	4	—	1	—	3	—	3	2	2	—	—	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—
May	79	1	12	1	—	—	8	—	3	—	—	—	—	—	4	3	1	—	—	—	—	—	—	—	1	—	2	3	—	—	—	—	—	—
June	17	—	15	—	—	—	12	—	1	—	2	—	—	—	4	1	1	—	—	—	—	—	—	—	3	—	4	1	1	—	1	—	—	—
July	7	—	2	—	1	—	6	—	2	—	1	—	—	—	4	4	2	—	—	—	—	—	—	—	2	—	2	—	—	—	4	—	—	—
August	4	—	1	—	—	—	3	—	4	—	—	—	5	—	2	4	1	—	—	—	—	—	1	—	1	1	2	1	—	—	—	—	1	—
September	12	—	5	—	—	—	—	—	—	—	4	—	2	—	1	1	—	—	—	—	1	—	1	—	2	1	3	—	—	—	2	—	—	—
October	19	—	4	4	—	—	2	—	4	—	1	—	1	—	—	2	1	—	—	—	—	—	—	—	2	1	2	—	—	—	1	—	—	—
November	—	—	5	3	—	—	4	—	4	—	1	—	—	—	1	2	1	—	—	—	—	—	—	—	—	—	1	1	—	—	2	—	—	—
December	—	—	4	3	—	—	10	—	1	—	2	—	5	—	1	3	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—
Totals	900	3	122	19	5	—	70	—	31	—	19	—	21	—	28	30	18	—	5	—	2	—	4	—	11	3	16	7	1	—	10	—	1	—

Monthly notification of notifiable Infectious Diseases.

Months.	Cases landed from the Bay or brought into the Town for treatment.																							
	Influenza		Enteric Fever		Chicken Pox		Small Pox		Membranous Croup		Diphtheria		Pneumonia		Pulmonary Tuberculosis		Paratyphoid Fever		Erysipelas		Gastro-Enteritis	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
January	1	—	—	1	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—
February	2	—	1	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—
March	—	—	1	—	2	—	1	—	1	—	—	—	2	1	—	1	—	—	—	—	—	—
April	2	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
May	—	—	1	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—
June	—	—	1	—	—	—	—	—	—	—	1	—	1	—	1	—	—	—	—	—	—	—
July	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	1	1	—	—	—	—	—
August	—	—	2	—	—	—	—	—	—	—	—	—	1	—	—	1	1	—	—	—	—	—
September	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	1	1	—	—	—	—	—
October	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	1	—	—	1
November	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
December	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Totals ...	4	—	7	1	2	—	3	—	1	—	2	—	4	4	1	4	2	—	1	—	—	2

ENTERIC FEVER.

Eleven cases of Enteric Fever occurred during the year. There were three deaths.

Seven cases were landed from shipping in the Bay or brought into the Town for treatment.

The decline in the incidence of this disease in Gibraltar continues; the 11 cases were sporadic, occurring during the period May to October and in different parts, and appearing to have no relationship to one another.

Each case was carefully inquired into, but the cause of the disease was not definitely traced in any case.

There is nearly always the possibility of infection in Spain where the disease is endemic.

All cases were adequately isolated either in hospital or at home.

INCIDENCE OF ENTERIC FEVER IN GIBRALTAR, 1916—1925.

		1916	1917	1918	1919	1920	1921	1922	1923	1924	1925
Local Cases	Number	7	43	31	9	24	21	20	19	17	11
	Deaths	2	4	3	1	2	6	—	2	—	3
Imported Cases	Number	7	13	36	26	15	13	8	4	10	7
	Deaths	—	3	5	5	3	—	—	1	—	1

SEASONAL PREVALENCY OF ENTERIC FEVER IN GIBRALTAR DURING 1925.

Month	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	D.c.	Total
Local Cases	—	—	—	—	1	3	2	1	2	2	—	—	11
Imported Cases	—	1	1	—	1	—	1	1	2	—	—	—	7

CHICKEN POX.

Seventy cases of Chicken Pox were notified during the year. The disease was of a mild type and no complications occurred.

DIPHTHERIA.

There were 31 cases notified during 1925, compared to 19 in the previous year.

The disease has in recent years become more prevalent but the cases during 1925 have not been of a severe type, many being bacteriological rather than clinical, and it may be presumed that some cases have been missed altogether.

There were no deaths.

Antitoxin was used in all cases, the amount supplied to medical practitioners during the year being nearly 600,000 units.

Seven cases were removed to hospital, and twenty-four treated at home.

There was nothing in the form of an epidemic, most of the cases occurring singly in different parts of the town.

None of the cases were related to the milk supply.

The disease is spread by personal contact, and often by a mild or missed case.

The increased prevalence of this disease in Gibraltar in recent years may be in some way due to the number of cases treated at home. Crowded conditions exist, and home isolation with proper precautions, is difficult to obtain.

Most of the cases (84 per cent.) occurred in children under 15 years of age.

The general measures taken for the prevention of Diphtheria include the isolation of the patients, either at home or in hospital, examination of contacts (the number of contact swabs examined for B. Diphtheræ during 1925 was 155, of these 10 were positive), exclusion of members of the family and contacts of patient of school age from attending school, the supply of Diphtheria antitoxin.

The number of "carriers" during prevalence of Diphtheria is usually so large that control by ordinary methods may be of little avail. Extensive swabbing must be followed by testing positives for virulence if the information is to be of value. This is a long and costly process, and extensive swabbing is not now carried out.

Only limited isolation accommodation exists in Gibraltar and it is not possible, under present circumstances, to carry out the policy of hospital isolation of virulent "carriers."

In 1918 Schick testing and the administration of toxin-antitoxin began in America, and since that date has been extensively used both at home and abroad.

There appears to be no doubt that if the toxin-antitoxin inoculation against Diphtheria were generally adopted it would lead to a great diminution in the incidence of the disease.

The Schick test is an intra-cutaneous test of the susceptibility or otherwise of people to Diphtheria. The reaction depends upon the fact that persons who have less than a certain quantity of antitoxin in their blood and tissue fluids cannot neutralize a standard dose of Diphtheria toxin.

The method of applying the test is very simple; a small amount of dilute toxin is injected into the skin of the left forearm. A control dose of heated toxin is injected into the skin of the right forearm. The results are noted on the 1st, 2nd, 7th and sometimes 14th day after testing. In a simple positive reaction a red patch from ½ to 2 ins. in diameter appears in twenty-four hours to seven days, it gradually fades leaving a brownish stain, sometimes with a little powdery disquamation. There is no pain or constitutional disturbance whatever and no interference with school attendance.

As almost all children over 6 months and under 5 years of age are liable to contract the disease it is not necessary to apply the Schick test to them, they should all be inoculated and protected.

Active immunisation is the process by which the tissues of a person are stimulated to produce anti-bodies. Active immunity depends upon the power of the body cells to respond to the stimulus of an invading body organism or its products. This is a contra-distinction to passive immunity which is due to the injection of large quantities of anti-bodies into the circulation at one time. The former is almost certainly permanent, the latter temporary.

Active immunity is stimulated by the intra-muscular injection of 1·0 c.c. of a toxin antitoxin mixture, at weekly intervals, for three weeks. From 1 to 12 weeks later the vast majority of people so treated are shewn by the Schick test and by the estimation of the antitoxin in the blood to be immune. In England no serious reactions have been recorded. A few cases of slight rise in temperature have occurred and a few sore arms.

With regard to the administration of serum the following recommendations taken from a memorandum issued by the Ministry of Health might be adopted here in all cases, as there is sometimes a tendency to make the initial dose too small:—

"As regards the curative dose, though no stereotyped procedure can be laid down, experience proves 8,000 units to be the minimum in the great majority of cases, whatever the patient's age. In an early case an initial dose of this size if followed by a definite improvement after about 12 hours, precludes the necessity of further administration.

Larger initial doses of from 16,000 to 30,000 units are required if the administration has been delayed until the third or fourth day after onset of the disease. In connection with the method of injection of the serum, the intramuscular route is given priority, in view of the slower absorption by the subcutaneous route. In very severe and late cases a combination of the methods may be advisable. Prophylactic doses (usually 500 to 1,000 units) are, as a rule, not indicated for contacts under daily observation, but may be desirable in order to confer temporary immunity."

CASE INCIDENCE AND MORTALITY FROM DIPHTHERIA 1916—1925.

	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925
Cases	11	4	7	3	6	7	30	21	19	31
Deaths	5	—	—	—	—	1	3	2	2	—

MEASLES.

There were only eighteen cases of Measles notified during the year. This is the lowest number for many years.

There were no deaths from this disease.

CASE INCIDENCE AND MORTALITY FROM MEASLES, 1916—1925.

	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925
Cases	543	11	25	73	115	388	305	31	147	18
Deaths	5	—	2	—	1	6	4	2	4	—

SEASONAL PREVALENCY OF MEASLES IN GIBRALTAR DURING 1925.

	Jan.	Feb.	Mar.	Apl.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec	Total
Local Cases	—	4	5	2	1	1	2	1	—	1	1	—	18
Imported Cases	—	—	—	—	—	—	—	—	—	—	—	—	—

UNDULANT FEVER.

There were four cases of this disease notified during the year.

From enquiries it appears that infection in these cases was acquired out of Gibraltar.

The precautions taken in recent years to safeguard the population against the disease include the boiling of all imported milk before sale, and the periodical testing of all goats on the Rock as to their freedom from infection with the organism of Malta Fever.

The importation of goats into Gibraltar is controlled.

CASE INCIDENCE AND MORTALITY FROM UNDULANT FEVER, 1916—1925.

	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925
Cases	6	1	—	1	1	4	6	12	4	4
Deaths	1	—	—	—	—	—	—	1	—	—

SEASONAL PREVALENCY OF UNDULANT FEVER IN GIBRALTAR DURING 1925.

	Jan.	Feb.	Mar.	Apl.	May	June	July	Aug	Sep.	Oct.	Nov	Dec.	Total
Local Cases	—	—	—	1	—	—	1	1	1	—	—	—	4
Imported Cases	—	—	—	—	—	—	—	—	—	—	—	—	—

INFLUENZA.

This disease was removed from the list of notifiable diseases on the 4th November, 1925.

Up to that date 900 cases had been notified with three deaths.

The disease was of a mild nature, the majority of cases occurring during the 1st Quarter of the year.

SEASONAL PREVALENCY OF INFLUENZA IN GIBRALTAR DURING 1925.

	Jan	Feb.	Mar.	Apl.	May	June	July	Aug.	Sept.	Oct.	Nov	Dec.	Total
Local cases	75	159	298	230	79	17	7	4	12	19	—	—	900
Imported cases	2	—	—	2	—	—	—	—	—	—	—	—	4

PNEUMONIA.

There were 122 cases of this disease notified during the year, with 19 deaths.

SEASONAL PREVALENCY OF PNEUMONIA IN GIBRALTAR DURING 1925.

	Jan.	Feb.	Mar.	Apl.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Local cases ...	12	33	22	7	12	15	2	1	5	4	5	4	122
Imported cases	—	—	—	2	—	—	1	—	1	—	—	—	4

SCARLET FEVER.

Five cases only of Scarlet Fever occurred during the year. There were no deaths.

Except for the epidemic in 1923, this disease is not known to have occurred in Gibraltar in epidemic form.

CASE INCIDENCE AND MORTALITY FROM SCARLET FEVER, 1916—1925.

	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925
Cases	11	—	—	1	6	13	9	218	12	5
Deaths	—	—	—	—	—	—	—	5	1	—

OTHER NOTIFIABLE DISEASES.

The following other notifiable diseases were notified during the year :—

Venereal Diseases	21	cases
Rubella	5	,,
Dysentery	10	,,
Erysipelas	19	,,
Ophthalmia Neonatorum	2	,,
Puerperal Fever	1	,,
Paratyphoid	1	,,
Gastro Enteritis	16	,,

SMALL POX.

No case of Small Pox occurred in Gibraltar during the year.

Three cases were landed from shipping in the Bay.

Incidence of Small Pox in Gibraltar, 1888-1925, shewing local cases, cases brought in for treatment and cases landed from the Bay.

Year.	Local Cases.	British Subjects residing at La Linea who come in for treatment.	Landed from Bay.	Total.	Deaths (local cases).	Deaths (Bay cases).
1888	2	1	5	8	—	1
1889	63	—	—	63	6	—
1890	34	2	6	42	3	1
1891	1	—	9	10	—	1
1892	5	—	6	11	1	1
1893	9	—	1	10	1	1
1894	83	2	9	94	8	—
1895	29	—	3	32	—	1
1896	60	1	14	75	3	1
1897	45	—	3	48	2	1
1898	4	—	2	6	—	1
1899	9	1	4	14	1	—
1900	94	—	8	102	5	1
1901	11	—	3	14	—	—
1902	11	—	6	17	—	—
1903	5	—	2	7	—	1
1904	—	—	1	1	—	—
1905	44	—	1	45	4	—
1906	94	—	22	116	14	—
1907	11	1	3	15	—	—
1908	—	—	2	2	—	—
1909	3	—	4	7	—	1
1910	11	3	—	14	3	—
1911	11	—	5	16	2	—
1912	10	3	—	13	4	—
1913	11	—	2	13	1	—
1914	4	—	1	5	1	—
1915	15	6	1	22	1	—
1916	6	1	3	10	—	1
1917	—	—	—	—	—	—
1918	—	—	1	1	—	—
1919	3	—	16	19	—	4
1920	—	—	2	2	—	1
1921	1	—	1	2	—	1
1922	3	—	—	3	—	—
1923	—	—	—	—	—	—
1924	6	14	3	23	—	1
1925	—	—	3	3	—	—
Totals	698	35	152	885	60	20

VACCINATION.

During the year 601 vaccinations were performed, 190 of which were in accordance with the provisions of "The Vaccination Ordinance, 1887," on children who had attained the age of 12 years.

The Public Vaccinator has performed 297 vaccinations and 294 re-vaccinations.

The following statistics show the state of vaccination for births during the year 1925:—

Number of Infants registered in Gibraltar.	Died before vaccination.	Left Gibraltar.	Number requiring to be vaccinated.	Certified as successfully vaccinated.	Certified as insusceptible to vaccination.	Vaccination postponed.	Number remaining.	Vaccination certificates received for children not registered in Gibraltar.
372	19	8	345	299	—	13	33	15

VENEREAL DISEASE.

Venereal work is now done in the City Council Laboratory free of charge for residents of Gibraltar and for Gibraltarians resident in the neighbourhood.

There are full facilities provided at the Colonial Hospital for both out and in-patient treatment of venereal disease, male and female.

*The number treated in the Male Venereal Ward was 61 compared with 83 in 1924. Of these 18 were seamen. No female patient was treated for Venereal disease.

Venereal Diseases treated in Hospital—In-patients:

British Shipping cases	13
Alien Shipping cases	9
Local cases	26
Do. do. (Maltese)	12
Do. do. (Indian)	1
Total ...	61

*Annual Medical Report, Colonial Hospital.

HOSPITAL ACCOMMODATION FOR INFECTIOUS DISEASES.

SEGREGATION BLOCK—Colonial Hospital.

Grcund floor—Lower Ward	5	beds.
Single room	2	„
Single room	1	„
First floor —Upper Ward	5	„
Single room	2	„
Single room	1	„
Total ...	16	beds.

*In the Segregation Block 36 cases were treated compared with 48 in 1924. The cases of enteric fever, influenza, pneumonia, and undulant (Malta) fever were as in former years kept in the general wards.

ISOLATION HOSPITAL—North Front.

Male Block	No. 1 Ward ...	8	beds.
	No. 2 Ward ...	4	„
Female Block...	No. 1 Ward ...	4	„
	No. 2 Ward ...	2	„
Observation Ward...		2	„
Reserve Block	No. 1 Ward ...	6	„
	No. 2 Ward ...	2	„
Naval and Military Block ...	No. 1 Ward ...	6	„
	No. 2 Ward ...	2	„
	Total ..	36	beds.

The buildings are one-storied. Quarters are provided for nurses and attendants. There is a discharge Block, a laundry and a steam disinfecting apparatus. Electric light is fitted throughout, and drinking and brackish water laid on from the Town mains.

*The Isolation Hospital was open, under the care of Dr. Durante, for 36 days during the year. The three cases of small-pox all occurred in seamen, there being no local cases of the disease. A staff nurse was placed there on duty when the hospital was open.

*Annual Medical Report, Colonial Hospital.

SERA, VACCINES, &c., KEPT IN STOCK.

Anti-Meningococcus Serum.
Anti-Streptococcus Serum.
Anti-Anthrax Serum.
Anti-Dysentery Serum.
Anti-Plague Serum.
Plague Prophylactic.
Cholera Vaccine.
Diphtheria Antitoxin.
Tetanus Antitoxin.
Tuberculin.
Insulin.
Calf Lymph.

INVESTIGATION AND PREVENTION OF OTHER DISEASES.

MOSQUITOES.

During the summer an intensive Mosquito Campaign was carried out in Gibraltar. This has formed the subject of a special report to the Council and is included as an appendix.

The question of mosquito control in Gibraltar has been brought forward from time to time by Medical Officers of Health with a view to increasing the efficiency of the measures of prevention. In 1913 the Medical Officer of Health drew attention to the prevalence of Stegomyia mosquitoes in Gibraltar and the difficulty of dealing effectively with them.

He says "What usually happens is that the occupiers of "premises in which mosquito larvæ are found are perfectly "willing to empty and cleanse the water receptacles concerned "when it is pointed out to them, but never look at them again "till the Inspector's next visit. The result is that mosquitoes "continue to breed in them and the pest is not sensibly dim-"inished."

In 1920 the Medical Officer of Health writes as follows:—

"The various authorities engaged in the work of eradica-"tion of these pests make any satisfactory control almost "impossible. To be effective it should all be carried out under "the direction of the Sanitary Authority of the Town."

Experience during 1925 confirms these opinions.

The carrying on of the campaign in a thorough manner has necessitated the employment of a large number of men and much expenditure of money. Although closer co-operation was established during 1925, between different Authorities than had previously been the case, the need of legislation was apparent.

The Council have now addressed the Colonial Government on this subject and the question is under consideration.

FLIES.

A vigorous anti-fly campaign has been continued in Gibraltar during 1925.

Flies were not, on the whole, as prevalent as during the preceding summer, although in certain localities they appeared in great numbers in the autumn, specially in the North Front and Europa areas.

It is probable that large numbers are brought in daily from neighbouring localities.

Every effort is made to deal with breeding places, refuse is collected and removed twice daily during the summer months, stables are regularly sprayed, and propaganda measures employed with a view to combating this pest.

RAT REPRESSION.

The rat campaign described in detail in last year's report was continued throughout 1925 with excellent results.

The fact that plague is endemic in Morocco renders this campaign of great importance to Gibraltar.

Rats Destroyed during 1925, by Districts (not including H.M. Dockyard).

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	Total
South District	202	182	201	204	239	360	368	351	333	252	216	296	3,204
Town ,, ...	167	212	171	118	146	223	309	275	281	253	163	213	2,531
North ,, ...	91	90	107	42	31	67	102	94	112	135	73	162	1,106
Sheds and Warehouses Waterport Wharf and Commercial Mole	219	112	95	25	39	18	33	36	28	57	13	31	706
Total.....	679	596	574	389	455	668	812	756	754	697	465	702	7,547

Rats examined during 1925.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	Total
Infected	—	—	—	—	—	—	—	—	—	—	—	—	—
Uninfected	—	1	7	9	8	12	12	19	15	9	13	11	116

Number of poisoned baits laid by Rat Catchers during 1925.

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	Total
4,019	2,613	2,733	1,579	2,089	2,324	2,990	4,305	5,559	5,511	5,044	4,740	42,506

Rats Destroyed during 1925.

		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	Total
Civil and Colonial Property	Trapped ...	614	535	509	355	417	621	755	691	680	647	432	666	6,922
	Poisoned...	65	61	65	34	38	47	57	65	74	50	33	36	625
H.M. Dockyard	Trapped ...													2,077
	Poisoned ..													558
Total.....		679	596	574	389	455	668	812	756	754	697	465	702	10,182

DISINFECTION.

During the year 187 houses were disinfected on account of the occurrence of infectious disease.

The total number of articles disinfected at the North Front Disinfecting Station was 2,593. This number does not include articles received from shipping in the Bay.

The method in use for the disinfection of rooms is that of Formalin Spray or by vapourising Formalin.

Re-papering, re-painting, lime-washing and soap and water cleansing after disinfection are the methods chiefly relied on.

The disinfection of infected houses or rooms is always done by one particular man in the Public Health Department under the strict supervision of a Sanitary Inspector.

The schools have been disinfected by spraying from time to time.

Stables are regularly disinfected by spraying during the summer months.

The Disinfecting Station is situated near the Refuse Destructor from whence the steam supply is derived.

The machine is a Washington Lyons.

AMBULANCE FACILITIES.

One motor and two horse ambulances are available for (1) non-infectious cases and accident cases, (2) infectious cases and (3) Small Pox cases.

The motor ambulance is also available for public use.

The ambulance service is under the control of the City Council.

DISEASES IN ANIMALS.

RABIES.

An outbreak of Rabies occurred in Gibraltar during the spring and originated, in all probability, in an animal suffering from the disease being at large for some hours and biting several dogs and cats.

The first case occurred on February 27th when a dog was reported to be wandering about the streets biting all dogs it came in contact with. The dog was eventually captured and destroyed at the isolation pen at the Corral.

A post mortem examination gave strong suspicions that the dog was suffering from rabies and the brain was extracted and sent to the Municipal Laboratory, Seville, for examination. A positive Negri result was given by Seville, and all dogs which had been bitten or had been in contact with the rabid dog were (as far as could be ascertained) destroyed. The owner of the dog as well as his family proceeded to Seville and underwent anti-rabic treatment at the Laboratorio Municipal of that city.

The Muzzling Order which had been withdrawn but two days previous to this occurrence was again put into force.

Case No. 2—A cat which was acting in a suspicious manner and had bitten its owner. The brain was extracted and gave a positive result to animal inoculation. The person bitten was subjected to anti-rabic treatment at the Institut Pasteur du Maroc, Tangier.

Case No. 3—A dog which had been bitten by another dog, subsequently found to be No. 1. The search for Negri bodies in this instance gave a negative result, and animal inoculations were not performed. The signs and symptoms exhibited by the dog and the appearances on post mortem examination were, however, so definite that it was thought advisable to subject to treatment all persons that had been in contact with the animal. Eight persons underwent anti-rabic treatment at the Laboratorio Municipal, Seville.

Case No. 4—A dog which shewed marked signs of the disease. The suspicions were confirmed by animal inoculation. One person who had been in contact with the dog was subjected to anti-rabic treatment at the Pasteur Institute, Tangier.

Cases Nos. 5 and 6—Brains sent for examination to the Pasteur Institute, Tangier, as a precautionary measure. Negative result.

Case No. 7—Suspicious case confirmed by animal inoculation. One person who had handled the dog underwent anti-rabic treatment at the Pasteur Institute, Tangier.

Case No. 8—A dog which shewed symptoms of the disease. Confirmed by animal inoculation. No persons involved.

Cases 9 to 24—Animals which had bitten persons and were kept under observation for periods of not less than 10 days as a precautionary measure.

In February a sub-committee of the Council, consisting of the Chairman and three Members of the Council, was appointed to consider the question of Rabies and make recommenda-

tions with a view to minimising the serious risks which might be run by the community of Gibraltar should an outbreak of this disease occur. On the findings of this sub-committee the "Diseases of Animals Ordinance, 1925," was enacted.

During the year a room was erected near the Refuse Destructor, North Front, for post mortem examination of animals. This room is fully equipped with sterilizer, post mortem instruments, &c., and a sink with water laid on. A galvanized iron barrow with cover for the conveyance of dead cats and dogs was also obtained.

Valuable assistance has been rendered during the outbreak by the Police and local Press.

Notes on the Outbreak of Rabies in Gibraltar in 1925 by the Veterinary Adviser to the Council.

Sporadic cases of Rabies have occurred from time to time in Gibraltar for many years past. This is not to be wondered at when one realises that the disease is endemic in Spain, the difficulties of controlling the movements of stray dogs to and from Spain, and the peculiar conditions under which dogs are kept in Gibraltar itself. One rabid dog straying into the Colony may infect innumerable other dogs or cats and the disease becomes widely disseminated in a short space of time. The outbreak in February originated with a dog in Engineer Lane which had unfortunately been at large for 36 hours before being put into isolation. It was impossible to trace all the animals bitten by this dog—eight dogs and two cats definitely known to have been bitten were destroyed at once, but it is most probable that this same animal was responsible for the infection of the four other cases in dogs which occurred during the succeeding two months. One case occurred in a cat.

The disease in Spain and along the shores of the Mediterranean coast usually manifests itself in the "Dumb" form, but three of the above cases in dogs were definitely of the "Furious" type.

The last case occurred on April 18th and the rapid stamping out of the disease may be attributed to the stringent suppressive measures put into force on the introduction of the "Diseases of Animals Ordinance, 1925," to the destruction of a large percentage of the dogs and cats in the Colony, to the strict enforcement of the "Muzzling Order" and to the loyal co-operation of the public.

Between the 1st January and 30th November, 1925, 781 cats and 172 dogs were destroyed in the lethal chamber at the Corral.

The question of preventive inoculation of dogs has been under consideration, but the method is very much in its infancy, the degree of immunity conferred not fully known, and the difficulty and expense of obtaining material for inoculation is so great that the process is not yet considered a practical proposition in dealing with a Rabies outbreak in Gibraltar.

Although the Colony has now been free from Rabies for some time there is always the danger of a fresh outbreak with the disease constantly at our gates, and we cannot afford to make any relaxation of the preventive measure at present in force.

Statement of investigations in animals carried out during outbreak of Rabies in 1925.

Case No.	Date	Owner	Animal	No. of animals bitten or in contact with suspected animal.		Disposal of suspected animal.	Disposal of brain of suspected animal.	Result of examination of brain of suspected animal.		Number of persons subjected to anti-rabic treatment.	
				Dogs	Cats			Negri Bodies.	Animal inoculation.		
1	12/2	V.G.	Dog	8	2	Destroyed	Sent to Municipal Laboratory, Seville.	P	—	4	Three other persons who had been in contact with a dog bitten by the suspected one were sent to Seville for advice but were not treated as it was considered unnecessary.
2	7/3	C.A.	Cat	—	—	Do.	Sent to Pasteur Institute, Tangier.	P	P	1	
3	20/3	T.L.	Dog	2	2	Do.	Sent to Municipal Laboratory, Seville.	N	—	8	The signs and symptoms exhibited by this dog and the appearances on P.M. examination were so definite that it was thought advisable to send all persons in contact with it for treatment.
4	28/3	M.B.	Dog	1	—	Do.	Sent to Pasteur Institute, Tangier.	P	P	1	
5	31/3	E.R.	Dog	—	—	Died	Do. do.	N	N	—	
6	31/3	G.C.	Cat	—	—	Destroyed	Do. do.	N	N	—	
7	18/4	F.B.	Dog	1	1	Died whilst under observation.	Do. do.	N	P	1	
8	18/4	J.W.	Dog	1	1	Destroyed	Do. do.	N	P	—	No persons were involved in this case.
9	19/4	J.H.	Dog	—	—	Isolated	—	—	—	—	Had no symptoms to indicate Rabies. Was kept under observation 14 days as a precautionary measure and then discharged.
10	22/4	J.C.	Dog	—	—	Do.	—	—	—	—	Do. do.
11	22/4	M.R.	Cat	—	—	Do.	—	—	—	—	Kept under observation 13 days and then discharged.
12	2/5	R.S.	Dog	—	—	—	—	—	—	—	Dog could not be captured as it ran away to Spain.
13	7/5	A.A.	Dog	—	—	Isolated	—	—	—	—	Kept under observation 13 days and then discharged.
14	7/5	A.M.	Cat	—	2	Destroyed	Sent to Pasteur Institute, Tangier.	N	N	2	Had suspicious symptoms of Rabies.
15	7/5	A.R.	Dog	—	—	Isolated	—	—	—	—	Kept under observation 10 days and then discharged.
16	13/5	E.G.	Dog	—	—	Do.	—	—	—	—	Do. do.
17	15/5	V.M.	Dog	—	—	Do.	—	—	—	—	Do. do.
18	26/5	E.R.	Dog	—	—	Do.	—	—	—	—	Do. do.
19	26/5	E.B.	Cat	3	—	Destroyed	Sent to Pasteur Institute, Tangier.	N	N	—	Contact dogs discharged after being kept 10 days under observation.
20	26/5	F.P.	Dog	—	—	Isolated	—	—	—	—	Kept under observation 10 days and then discharged.
21	8/6	J.B.	Cat	—	—	—	—	—	—	—	Do. do.
22	29/9	A.D.	Dog	—	—	—	—	—	—	—	Do. do.
23	27/11	J.R.	Dog	—	—	Destroyed	Sent to Pasteur Institute, Tangier.	N	N	—	
24	8/12	M.B.	Dog	—	—	Isolated	—	—	—	—	Do. do.

PULMONARY TUBERCULOSIS.

NUMBER OF NOTIFICATIONS AND DEATHS.

During the year there have been 28 notifications of Pulmonary Tuberculosis, an increase of one on the number notified during the previous year.

AGE AND SEX DISTRIBUTION OF CASES OF PULMONARY TUBERCULOSIS—1925.

Age	Under 15		15 to 19		20 to 24		25 to 29		30 to 34		35 to 39		40 to 44		45 to 49		50 to 55		56 & over		Total	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Cases	—	—	1	1	2	—	3	—	2	—	3	2	1	—	4	2	2	1	2	1	21	7
Deaths	—	1	1	2	2	2	5	1	1	—	3	1	2	—	2	—	2	—	4	1	22	8

These figures indicate that the number of cases of Pulmonary Tuberculosis in Gibraltar remains about the same, and they form potential sources of infection throughout Gibraltar.

During the year there have been an average of eight cases of Pulmonary Tuberculosis in the "Home," where special arrangements are provided for this class of cases, but sufferers do not readily avail themselves of these facilities, and are reluctant to leave their families.

With the addition of the land on the East Side of the "Home," which is about to be enclosed, the means for dealing with the disease will be much improved and it may be possible to erect shelters, and provide more suitable conditions for early cases.

The Pulmonary Tuberculosis death rate for Gibraltar is 1·7 per 1,000 living and that for England and Wales was 1·58.

BACTERIOLOGICAL WORK.

The number of specimens of sputum examined for Tubercle bacilli during the year has been two hundred and four, of which forty-four were positive and one hundred and sixty were negative.

Number of Cases and Deaths from Tuberculosis of the Lung, and rate per 1,000 of Population 1891-1925.

Year.	No. of Cases notified.	No. of Deaths.	Death rate per 1,000 of Population.
1891	Not notifiable.	36	1·8
1892	do.	40	2·1
1893	do.	26	1·36
1894	do.	39	2·04
1895	do.	34	1·78
1896	do.	34	1·78
1897	do.	31	1 62
1898	do.	32	1·67
1899	do.	36	1·8
1900	do.	41	2·14
1901	do.	32	1·57
1902	do.	45	2·21
1903	do.	17	0·83
1904	do.	23	1·1
1905	do.	24	1·14
1906	26	22	1 04
1907	25	14	0·66
1908	32	26	1·42
1909	43	25	1·36
1910	53	27	1·48
1911	127	32	1·67
1912	99	27	1·41
1913	63	33	1·78
1914	43	36	1·99
1915	38	29	1·61
1916	28	29	1·56
1917	29	31	1·67
1918	30	37	2 05
1919	32	39	2·19
1920	31	32	1·80
1921	34	30	1·61
1922	29	26	1·50
1923	48	22	1·26
1924	27	26	1·5
1925	28	30	1·7

The total number of deaths from Pulmonary Tuberculosis was thirty as compared with twenty-six for the previous year.

REPORT OF THE DESTITUTE SICK AND TUBERCULOSIS SCHEME FOR 1925.

The expenditure for the past year has been £4,849 2 10 as compared with £4,536 4 2 for the previous year, and has exceeded the grant of the Colonial Government, notwithstanding the great care exercised in the administration of the Scheme.

In order to assist in meeting this excess expenditure the Colonial Government made an additional grant of £700.

THE GIBRALTAR HOME FOR SICK AND DESTITUTE.

INDOOR RELIEF.

The average number of inmates during the year was 64. The average number of persons suffering from Tuberculosis in the Home during the year was 8·3.

A portion of the upper floor of house No. 57 is set apart for cases of Tuberculosis, this arrangement is very satisfactory. A special scale of diet is also provided for these inmates.

The improvements to the "Home" carried out during the previous year have been of the greatest value and have added much to the comfort of the inmates.

A piece of ground on the East Side of the "Home" has now been taken over from the War Department and it is hoped that fencing will soon be erected and a direct means of access provided. This will be a valuable acquisition and provide space for recreation and amusement for the inmates, as well as being of great use for cases of Tuberculosis.

FEEDING.

The cost of feeding per head per day has averaged during the year 1s. 0¾d, which is slightly in excess of the cost for the previous year, but it is considered that this is a moderate figure.

The greatest economy has been exercised in the feeding of the inmates, but the rations are frequently inspected and the dietary enquired into and it may be said that the inmates are well and economically fed.

CLOTHING AND EQUIPMENT.

The sum of £380 7 7 has been spent during the year on clothing and equipment. The "Home" is now much better equipped than formerly, and this has increased the comfort of the inmates.

OUTDOOR RELIEF.

The arrangements for the administration of Outdoor Relief were fully described in the Annual Report on the Health of Gibraltar for 1924.

In March the Council resolved to appoint a Standing Committee on Poor Relief.

The first meeting took place on the 16th of March, 1925, and subsequent meetings were held as required. In all, 32 meetings took place during the year.

The whole of the cases of persons receiving relief from the Council were reviewed by the Committee and grouped under the headings Tuberculosis, Destitute Sick, and Poverty.

As the expenditure was largely exceeding the funds available, only those cases coming under the first two headings could continue to receive assistance, and even with the consequent reduction in the number of persons receiving relief, the expenditure for the year considerably exceeded the amount included in the estimates.

The number of persons in receipt of outdoor relief during the year under review is as follows:—

Month.	*Number of Persons.*
January	235
February	235
March	242
April	240
May	235
June	228
July	166
August	158
September	162
October	159
November	70
December	69

The total amount of relief given during the year was:—

Meat ... ... 25,374 lbs.,
Milk (Condensed) .. 10,848 tins,
Milk (Fresh) ... ... 6,857 pints,
in addition to small money grants to families.

The total cost of outdoor relief during the year has been £1,975 6 6.

DESTITUTE SICK AND TUBERCULOSIS SCHEME.

SUMMARY OF INDOOR AND OUTDOOR EXPENDITURE FOR THE YEAR 1925.

Indoor Relief.

	£	s.	d.	£	s.	d.
Provisions	1,258	14	9½			
Miscellaneous...	376	17	9½			
Maintenance of Buildings	108	17	7			
Rent	373	4	0			
Light	17	14	2			
Water	62	4	10			
Funeral Expenses	14	0	0			
Printing	8	11	4			
Insurance	1	0	0			
Equipment	330	7	7			
Clothing	50	0	0			
				2,601	12	1
Days of Subsistence	23,360					
Average No. of inmates	64					
Cost of feeding per head per day	1s. 0¾d					
„ „ „ „ year ...	£19	13	4			
Total all-in cost per head per day ...	2s. 5½d					
„ „ „ „ year ...	£44	18	0¾			
Calories per head per day	2,919					

Outdoor Relief.

	£	s.	d.	£	s.	d.
Meat 25,374 lbs....	813	9	2			
Milk (Fresh) 6,857 pints	85	14	3			
„ (Condensed) 10,848 tins...	384	13	5			
Grants to families	404	14	3			
Funeral Expenses	8	12	0			
Printing	5	19	2			
				1,703	2	3
*Salaries				544	8	6
Total expenditure on Indoor and Outdoor Relief for 1925.....				4,849	2	10

*Includes portion of salary of Sanitary Inspector employed part time on this work.

REPORT OF THE CITY ANALYST AND BACTERIOLOGIST.

This report is divided into three parts as follows :—

Part I. Food and Drugs—Public Health Ordinance.
Part II. Special Analyses.
Part III. Bacteriology.

In all 3,662 samples and specimens were examined.

This number exceeds those of other years and is an increase over last year of 169. This increase is due to 57 more food and drugs samples taken under the Public Health Ordinance, 60 more samples for special analysis, and 52 more pathological specimens. A chart showing the steady rise in the activities of the laboratories since their foundation in 1896 is considered of sufficient interest to include in this report. The number and variety of specimens allotted to (1) Military, (2), Navy, (3) Colonial Hospital, (4) Civil, and (5) Spain, is also given.

PART I—FOOD AND DRUGS.

The total number of samples submitted under this heading was 180, showing an increase of 57 over last year, and is double the number examined two years ago. These samples were taken officially by sanitary inspectors with the necessary formalities. There was one "appeal to cow" sample.

The following table shows the nature of the samples examined :—

Article.	*Number Examined.*
DAIRY PRODUCTS.	
Milk—Cows'	14
Goats', boiled	37
Goats, unboiled	6
Cheese	4
Butter	4
Edible Fats	29
Cereals	9
Tea, Coffee and Cocoa	12
Condiments	7
Sugar and Saccharine products	7
Beer, Spirits, Wine	23
Mineral Water	3
Drugs	23
Miscellaneous	2
	180

The articles classified above were made up as follows :—

Edible fats	Margarine 3, Olive Oil 20; Lard 6.
Cereals	Baking Powder 5, Cornflour 1, Maizena 1, Egg powder substitute 1, Eiffel Tower pudding 1.
Tea, Coffee, Cocoa	Tea 4, Coffee, 5, Cocoa 3.
Condiments	Vinegar 3, Mustard 2, Pepper 2.
Sugar, &c....	Sugar 7.
Beer, Spirits, Wine... ...	Whisky 4, Brandy 6, Gin 5, Rum 4, Wine 4.
Mineral Waters	Lemonade 3.
Drugs	Tinct. Iodine 3, Mercury Ointment 3, Ammon. tinct. of Quinine 3, Camphorated Oil 2, Seidlitz powders 3, Epsom salts 2, Tartaric acid 3, Bicarb. of soda 2, Citric acid 2.
Miscellaneous...	Sausages 2.

The number of samples found to be below the standards set out in the Public Health Ordinance was 13 (or 7·2 per cent.). For comparison, the number below the standards last year was 4·8 per cent.

PARTICULARS OF ADULTERATED SAMPLES.

Goats' milk deficient in milk-fat:—

Lab. No.	Fat.	Non-fatty solid.	Deficiency in fat per cent.
502	3·00	9·55	14·0
507	2·50	8·80	28·0
994	2·85	8·55	18·0
995	2·65	8·70	24·0
1956*	3·25	8·55	7·0

Cows' milk deficient in milk fat:—

Lab. No.	Fat.	Non-fatty solids.	Deficiency in Fat per cent.
941	1·95	8·90	35·0
1700	2·08	8·66	30·0
1764	2·20	8·20	26·6
3167	2·90	9·00	3·0

No. 941 Taken from cow.
„ 1700 Vendor.
„ 1764 "Appeal to cow" in connection with No. 1700, also deficient in non-fatty solids equal to 3·5% added water.

Cows' milk deficient in non-fatty solids:—

Lab. No.	Fat.	Non-fatty solids.	Equivalent to added water.
1598	3·47	8·06	5 per cent.

Other samples found to be below standard were:—

Lab. No.	Article.	Adulteration.
2017	Mercury ointment.	47 per cent. deficiency in mercury.
3034	Camphorated oil.	15 per cent. deficiency in camphor.
3346	Rum.	Reduced with water to 32° U.P.

In all cases where the City Council considered it advisable legal proceedings were taken against the vendor.

*Not exposed for sale.

GOATS' BOILED MILK.

It will be noticed that there were four goats' boiled milk seriously deficient in milk-fat. It is compulsory to boil all goats' milk imported into Gibraltar. The effect of boiling on the milk is to produce a scum, which, to improve appearances, the dairyman skims off. This scum consists largely of fat, and the process of scumming robs the milk of one of its very valuable constituents. I cannot think that the skimming is done to wilfully defraud the public. The vendor when selling goats' boiled milk to the inspector always declares the milk "desnatada" (or skimmed) thus evading the law. I have carried out experiments at a Gibraltar dairy and found that most of the fat and non-fatty solids in the scum could easily be worked again into the milk, and analyses made before and after the experiment showed very little difference, if any, in fat and non-fatty solids contents.

The average composition of cows' milk was :—

Fat = 3·83.
Not-fatty solids = 8·76.

The average composition of goats' milk was :—

Fat = 4·19.
Not-fatty solids = 8·73.

These figures are well above the statutory limits for Gibraltar. In no instance was it found that an imported goats' milk had been offered to the public unboiled, and no preservative was found in any sample of milk received.

With regard to the cow which at one time was giving very poor milk a recent analysis shows the milk to be again normal.

DRUGS.

Of the 23 samples of drugs examined one sample of mercury ointment and one of camphorated oil were seriously below the B.P. requirements in the principal ingredients. The remaining twenty-one samples were up to the standard.

PART II—SPECIAL ANALYSES.

In all 139 samples of a special nature were examined. These were as follows :—

8 samples of condensed and dried milk for analysis and report.
1 sample of boiler scale for composition.
3 samples of cows' milk—private samples.
4 samples of water, Andalusian Water Co., Spain—complete chemical and bacteriological report.
4 samples of water, from Manager, Rio Tinto Mines, Spain—chemical and bacteriological report.
38 samples of flour, for chemical analysis.
1 sample of coffee, for analysis.
1 sample of dried milk powder for cause of damage.
4 samples of coal, for chemical analysis, City Electrical Engineer.
1 sample of sugar—cause of damage.
1 sample of goat's milk for chemical analysis.
1 sample of viscera for toxicological examination.
1 sample of horse flesh, for bacteriological investigation.
1 sample of viscera for toxicological examination.
1 sample of horse lung for bacteriological investigation.
1 sample of tank boat water—complete chemical and bacteriological.
1 sample of perfume—chemical analysis.
8 samples of tank boat waters, Algeciras water, for saline content.
2 samples of tobacco—for cause of damage.
1 sample of floor stain scrapings—suspected blood.
2 samples of sugar, for analysis.
1 sample of soya bean oil—complete chemical analysis for purity.
1 sample of hat—toxicological analysis.
28 samples of water, chemical and bacteriological, Superintendent Civil Engineer, H.M. Dockyard.
1 sample of methylated spirit—chemical analysis.
2 samples of brown sugar, for cause of damage.
1 sample of chloride of lime—analysis and report.
1 sample of tablet—suspected narcotic.
1 sample of tin of tomatoes, for analysis.
6 samples of alcohol for analysis.
1 sample of disinfectant (coal tar), for presence of arsenic.
11 samples of first field dressings—bacteriological for sterility.

ANDALUSIAN WATER CO., ALGECIRAS.

In view of the fact that this company's water is at times brought to Gibraltar in tank boats and sold to shipping it became imperative that the sources of this supply should be inspected and samples taken for complete chemical and bacteriological analysis. This was done on May 18th, 1925.

Altogether four samples were taken, representing the three intakes, where the water is originally collected on the mountain side, and the water as it leaves the tap on the quay.

The conclusion drawn was that the risk of pollution by human excremental matter was negligible and this, together with the satisfactory results of chemical and bacteriological analysis of each separate intake, allowed of this supply of water being considered safe for drinking.

TOXICOLOGICAL EXAMINATIONS.

(1) Viscera, sent by Police Surgeon.
No poisons were detected.

(2) Viscera, sent from Military Hospital.
Alcohol only found in the stomach contents.

(3) Tablet, found in soldier's mouth, suspected narcotic.
Contained chiefly sugar, some starch, and flavoured with peppermint. Narcotics not detected.

(4) Hat, sent by Spanish officer, arsenic suspected under band.
No trace of arsenic found, the substance was fat.

(5) Dried milk powder, partly filled tin, sent by M.O.H.
The milk powder was found to contain 37·12 per cent. of sodium chloride (common salt) and had probably been added by mistake.

(6) Stains on floor, examination at request of Chief of Police.
There was no evidence to show that these were blood stains.

CONDENSED MILK.

Complete chemical analyses were conducted on six samples of condensed milks which during the year were introduced into Gibraltar. Of these only two could be said to conform with the requirements of the law controlling the sale of such milks in England. The remaining four had been prepared from skimmed, or partly-skimmed milk, or the fat contents had been considerably reduced by the addition of cane sugar.

	Cane Sugar.	Lactose.	Milk fat.	Protein.	Ash.	Water.
Sweetened Condensed	43·38	10·88	9·10	9·32	1·89	25·43
Sweetened Condensed	—	—	0·75	—	—	—
Sweetened dried milk	34·27	20·80	17·50	20·54	3·44	3·45
Dried Milk	32·38	24·58	11·00	21·91	6·20	3·93
Dried Milk	42·22	27·04	0·45	24·71	4·22	1·36

The other sample of unsweetened condensed milk was analysed after diluting according to directions on tin and was found to have been made from cows' whole milk, and gave Fat 3·85, Non-fatty solids 9·37, Lactose 4·66, and total solids 13·22. The contents of the tin were found to be sterile.

Various brands of condensed milks are introduced to the Gibraltar public. There is often no indication on the tin to show whether it had been made from whole, partly-skimmed, or wholly-skimmed milk. Statements on some tins have been found to be entirely misleading. As an instance of this a brand of dried milk claimed "Full cream milk powder—sweetened." "To make milk not below the composition of standard milk add four parts of water by volume to one part by volume of this milk."

It was found that the original milk powder (before the sugar had been added) contained the correct percentage of fat but the addition of 34·27 per cent. of cane sugar had reduced the fat content from 26·5 per cent. to 17·5 per cent., and when diluted according to directions the resulting milk contained 2·32 per cent. of Fat. Lowest grade milk contains 3·0 per cent. of fat, which is the legal standard for cow's milk.

TANK BOAT WATERS.

Water is brought over in tank boats from a pure water supply at Algeciras and sold to shipping in times of drought when Gibraltar's public supply is restricted. A watch is kept lest sea water gains access to the tanks and causes pollution. Eight samples were taken and examined for salinity. In no instance was the presence of sea water detected.

TANK BOAT SAMPLES.

	Algeciras water.	1	2	3	4	5	6	7	8
Chlorine. Parts per 100,000.	2·0 to 3·6	3·2	2·4	3·0	2·6	2·1	9·1	2·2	2·1

PART III—BACTERIOLOGY AND PUBLIC HEALTH WORK.

3265 samples and specimens were examined during the year 1925, on behalf of the City Council, Military, Naval, and Colonial Hospital Authorities and general practitioners of Gibraltar.

These were as tabulated below:—

	Number of Specimen.
Drinking waters and others	222
Swabs for B. Diphtheræ, Vincent's organisms ...	499
Sputum for Tubercle Bacillus	204
Blood for Enteric and Undulant Fevers (Widal)...	170
Blood for Malaria parasites	23
Blood counts—complete	40
Blood cultures	18
Blood for sugar content	70
Blood urea (urea concentration factor)	14
Urine urea (urea concentration test)	5
Blood for Venereal disease (Wassermann) ...	631
Cerebro-Spinal Fluid (Wassermann)	16
Pus for Gonococci	65
Pus (other than V.D.)	21
Urine, general analysis, B. Coli, B. Typhosus, &c.	814
Fæces, for Typhoid, Dysentery, &c.	83
Milk for Mic. Melitensis	13
Human milk, analysis	12
Serum for Treponema Pallidum	11
Cerebro-Spinal Fluid (Cytology, Globulin, Sugar, Organisms)	16
Goats' blood for Undulant Fever	205
Rats examined for Plague	116
Histological (cutting, staining, mounting)... ...	4
Gastric contents	4
Miscellaneous	9
	3,265

Two Winchester quarts of sterile glucose saline were made for general Practitioners.

Forty-three autogenous vaccines were made and put in ampoules.

Twenty-five stock vaccines were diluted and dispensed in ampoules in series of doses.

Nine guineapigs were inoculated to determine virulence of organisms.

234 gallons of distilled water were made and sold.

60 tubes of blood serum were prepared and sold to U.S. Navy together with 5 guineapigs.

54 antityphoid inoculations were done in the Laboratory.

BLOOD CULTURES FOR STREPTOCOCCI, &c.

In eight cases of suspected endocarditis and septicæmia blood cultures for micro-organisms were undertaken. In four streptococcus (viridans) was obtained in pure culture and autogenous vaccines prepared.

There were four negative results.

BLOOD SUGAR DETERMINATIONS.

During the year under review seventy estimations of sugar in blood were done. These were in connection with the diagnosis of diabetes and Insulin treatment. Maclean's method was used.

RENAL EFFICIENCY TESTS.

In connection with renal disease the determination of blood urea was undertaken for the first time. The urea concentration factor was obtained for fourteen patients. Maclean's modification of Marshall and Van Slykes soya bean method was used.

The urea concentration test (Maclean and Wesselow) was carried out on five patients. The sodium hypobromite method with Dupre's ureometer was used.

APICAL INFECTION OF TEETH.

On five occasions the bacteriologist attended the dental surgery and took swabs of tooth cavities immediately after extraction. Streptococci (Viridans, (1) S. Ignavas, (2) S. Mitis, (1) S. Fæcalis) were found on four occasions and Vincent's organisms on one occasion. Autogenous streptococcus vaccines were prepared for three patients.

NOTIFIABLE DISEASES—SPECIMENS EXAMINED.

The Table below shows the results obtained in the Laboratory of specimens connected with notifiable diseases.

	Negative.	Positive.	Total.
Blood for Wassermann	438	203	631
Cerebro-Spinal Fluid (Wassermann)	13	3	16
Pus for Gonococci	36	29	65
Serum for Treponema Pallidum (D.G.)	9	2	11
Sputum for Tubercle B.	160	44	204
Swabs for B. Diphtheræ	361	118	499
Blood culture for typhoid	9	1	10
Blood smears for malaria	21	2	23
Widal reaction :—			
B. Typhosus	118	37	170
B. Paratyphosus A		1	
B. Paratyphosus B		5	
Mic. Melitensis		9	
Fæces :—			
B. Typhosus	67	1	63
B. Flexner		2	
B. Shiga		1	
Amœba Histolytica		2	
Goats' Blood for Undulant Fevers	205	none	205
Rats for Plague	116	none	116

Swabs for B. Diphtheræ include convalescents and contacts.

Fæces for B. Typhosus include convalescents.

A bacillus was isolated from fæces of three different cases of mild dysentery (blood, pus and mucus stools). This organism had all the morphological characters and sugar reactions of B. Dysenterine Shiga, but was not agglutinated with Shiga agglutinating serum. Also gelatine was not liquefied in 10 days. This organism was not included as positive Shiga.

DRINKING WATERS, &c.

These include samples taken from Moorish Castle and Willis's Road, 64; Governor's Parade, 12; Brackish Water, 12; Sea Water, 13; Underground Tanks and Wells, 74; North Front Wells, 7; Watering Jetty, 12; Spring Water, 4; and Catalan Bay Wells, 24.

Tables showing the figures of analysis of, (1) Gibraltar Public water, (2) Brackish water and (3) Boiler water are given below.

MONTHLY ANALYSES OF GIBRALTAR DRINKING WATER DURING 1925.

Date	Parts per 100,000.				B. Coli
	Total Solids	Chlorine	Temporary Hardness	Permanent Hardness	
12/ 1/25	12·0	2·4	4·5	Nil	not in 25 c c.
4/ 2/25	12·0	2·4	4·5	,,	,,
23/ 3/25	11·5	3·5	5·0	,,	,,
25/ 4/25	11·0	3·8	3·5	,,	,,
16/ 5/25	12·0	3·3	4·5	,,	,,
20/ 6/25	12·0	3·2	4·0	,,	,,
28/ 7/25	13·0	3·4	5·0	,,	,,
18/ 8/25	12·0	3·0	4·5	,,	,,
19/ 9/25	10·5	3·0	5·0	,,	,,
31/10/25	11·0	2·4	5·0	,,	*present in 1·0 c c
30/11/25	11·0	2·1	4·5	,,	*present in 10 c.c.
31/12/25	10·0	2·5	5·0	,,	not in 25 c c.
Average	11·5	2·9	4·5	,,	

*Local pollution.

RESULT OF ANALYSES OF BOILER WATER IN 1925.

SAMPLES TAKEN AT WATERING JETTY.

Date	Parts per 100,000.				B. Coli
	Total Solids	Chlorine	Temporary Hardness	Permanent Hardness	
12/ 1/25	137·0	34·8	45·0	—	not in 25 c.c.
4/ 2/25	—	36 0	—	—	present in 10 c c.
23/ 3/25	140 0	40·0	50·5	—	,, 2 c.c.
25/ 4/25	—	16·5	30 5	—	,, 1 c.c.
16/ 5/25	135 0	35·5	45·0	—	,, 2 c c.
20/ 6/25	—	30 0	—	—	,, 0·1 c.c.
28/ 7/25	—	36·0	45 0	—	,, 1 c c.
18/ 8/25	—	36 5	—	—	,, 5 c.c.
19/ 9/25	146 0	40 0	45·0	16·0	,, 0·1 c.c.
31/10/25	136 0	32 5	43 0	—	,, 1 c.c.
30/11/25	—	35·0	—	—	,, 1 c c.
31/12/25	—	30 0	—	—	,, 5 c c.
Average	138 8	33·5	43·4	16·0	

RESULT OF MONTHLY ANALYSES OF BRACKISH WATER SUPPLY.

SAMPLES OBTAINED FROM MAIN IN GOVERNOR'S STREET.

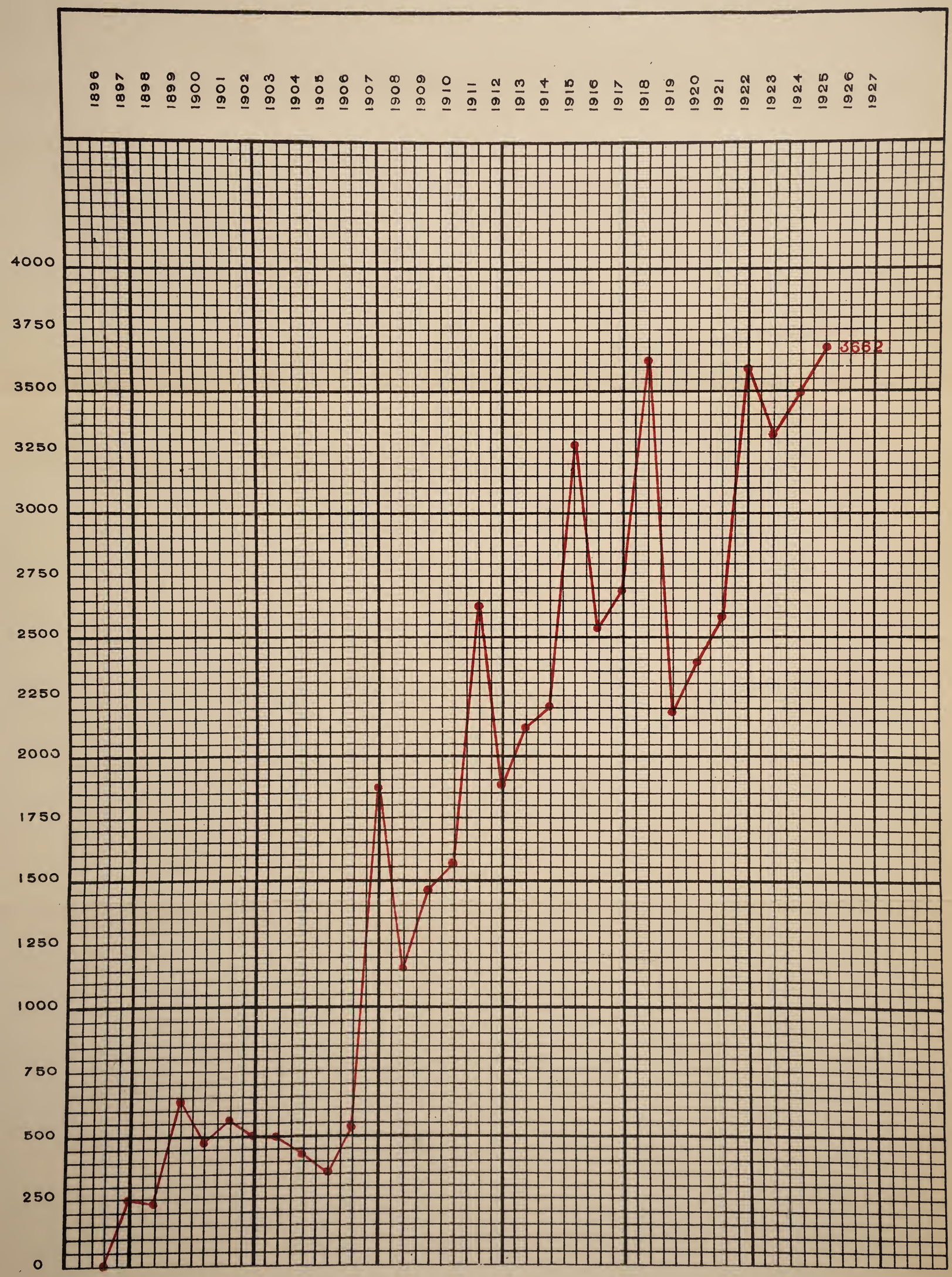
Date	Parts per 100,000.				B. Coli
	Total Solids	Chlorine	Temporary Hardness	Permanent Hardness	
12/ 1/25	1,370	620	20 0	210	present in 1 0 c.c.
4/ 2/25	1 295	670	20·0	220	,, 1·0 c.c.
23/ 3/ 5	1.304	650	26·0	140	,, 1·0 c c.
25/ 4/25	1 300	610	20·0	120	,, 1·0 c.c.
16/ 5/25	1,275	690	20 5	130	,, 0 1 c.c.
20/ 6/25	1 300	700	20·5	140	,, 1·0 c c.
28/ 7/25	1,535	770	18·0	120	,, 1·0 c c.
18/ 8/25	1,450	710	18·0	120	,, 2·0 c c.
19/ 9/25	1,560	750	19·0	118	,, 15 0 c c.
31/10/25	1,550	710	17·5	120	,, 2 0 c.c.
30/11/25	690	210	17·0	105	,, 1 0 c c.
31/12/25	570	210	15·0	95	,, 1·0 c.c.
Average	1,266	683	18·8	136	

DISTRIBUTION OF SPECIMENS.

Nature of Specimen.	Civil.	Military.	Navy from Military Hospital.	Navy.	Colonial Hospital.	Spain.	Total.
Blood, Wassermann	152	188	54	152	49	36	631
Blood count	24	8	5	1	1	1	40
Black culture	6	7	2	—	3	—	18
Blood sugar	57	—	—	—	6	7	70
Blood urea	4	—	—	—	10	—	14
Blood, Widal	110	8	4	—	36	12	170
Blood, Malaria	9	7	3	1	1	2	23
Goats for M.M.	205	—	—	—	—	—	205
Milk for M.M.	13	—	—	—	—	—	13
Swabs	291	48	2	18	140	—	499
Sputum	72	31	10	7	72	12	204
Urine	677	33	7	25	25	47	814
Fæces	17	28	5	1	10	2	63
Cerebro-Spinal Fluid	1	—	1	—	14	—	16
Pus (gonococci)	57	—	—	—	8	—	65
Serum for T. Pallidum ...	5	2	—	2	1	1	11
Human milk	12	—	—	—	—	—	12
Histological	3	—	—	—	1	—	4
Gastric contents...	6	4	—	—	1	1	12
Rats for Plague	116	—	—	—	—	—	116
Food and Drugs Act	180	—	—	—	—	—	180
Other foods, &c....	42	37	—	1	1	—	81
Waters	202	34	—	28	—	4	263
Pleural fluids	3	—	—	1	3	—	7
Auto-vaccines	21	13	5	—	4	—	43
Stock vaccines	14	3	—	1	—	7	25
First field dressings	—	11	—	—	—	—	11
Viscera	1	1	—	—	—	—	2
Guinea pig Innoc.	7	—	—	—	2	—	9
Miscellaneous	50	7	—	—	—	2	59

CITY COUNCIL OF GIBRALTAR.

CHART SHOWING NUMBER OF SAMPLES ANALYSED PER ANNUM SINCE THE YEAR 1896.



SANITARY CIRCUMSTANCES OF THE DISTRICT.

Much of the information given in this section of the Report has been kindly supplied by the City Engineer (Mr. W. H. Pearce, M.C., A.M.I.C.E., F.S.I.)

WATER SUPPLY.

Three classes of water are provided by the City Council of Gibraltar, viz.:—(*a*) Potable Water, (*b*) Brackish Water, (*c*) Boiler Water.

(*a*) *Potable Water.*

The supply of potable water which is used by the public and by the shipping arriving at the Port of Gibraltar, is derived from the rainfall.

Nearly every private house is provided with an underground storage tank and pump, and its roof or portion thereof is set apart as a rainwater catchment area.

This provision, however, is not sufficient of itself and, in consequence thereof, the City Council have provided extensive public works for the collection, storage and distribution of drinking water.

The water is collected upon enclosed, isolated natural and artificial catchment areas of some 35 acres in extent, and is stored in five large reservoirs, which are constructed in tunnels inside the Rock, of an aggregate storage capacity of about 7 million gallons of water. Additional storage capacity to the extent of 1,271,000 gallons is provided by a service reservoir near Moorish Castle.

Within the last few years a small rock collecting area which was found to be liable to pollution, has been disconnected and shut off. It is hoped that funds may become available so that this area can be renovated and re-opened.

From the reservoirs, a distributing system of pipes leads the water to the various parts of the City.

The distribution of potable water in Gibraltar is controlled by the City Council.

Water is laid on direct to many houses, but the largest supplies are drawn from public fountains situated at different parts of the City. The water is issued to private consumers and to licensed water vendors by public water checkers.

In addition, the City Council supply water to householders by butts and also by temporary pipe, and the latter method has been greatly extended during recent years.

The delivery of potable water to the commercial shipping is effected by means of private tank boats which obtain their supply from the Council's hydrants situated on the wharves.

The Council's potable water is subjected to full analysis at frequent intervals, and it is endeavoured to store all water for, at least, a fortnight, before distribution to the public. All distribution vehicles, butts, barrels, &c., are periodically disinfected by steam at the Council's Disinfecting Station.

During the last five years considerable extensions and improvements have been carried out to the distributing system, the most notable of which have been the laying of a new main to Catalan Bay Village and another to the Southern District, which districts were previously devoid of direct main pipe supply. New public fountains (supply points) have been provided at Catalan Bay Village, Bado's Passage, Flat Bastion Road, South Barrack Road and Armstrong Steps, and the number of piped supplies direct to houses has been increased.

The use of lead pipes for services from the mains to the stopcock has been discontinued and either steam galvanized iron tubing or tin-lined lead pipes are now used.

The quantity of rain water collected upon the Council's areas from 1st January to 31st December, 1925, was 17,609.757 gallons exclusive of an estimated quantity of 3,174,382 gallons which was run into the Brackish Water Reservoirs, and to waste due to lack of storage capacity during heavy downpours of rain.

The Waterworks are so administered that the minimum possible quantity of water is run to waste, careful manipulation being exercised in running water from the Potable water to the Brackish water reservoirs thus avoiding wastage during the rainy season through lack of storage space, and incidentally, effecting a saving in the pumping costs of Brackish water and improving the quality of the latter.

During the year 1925 the quantity of rain water disposed of from the Council's reservoirs amounted to 15,360,219 gallons which quantity was distributed as follows:—

(*a*) To the Public..... 10,115,799 gallons.

(*b*) To the Shipping ..... 1,657,891 gallons.

(*c*) Run to Brackish water reservoirs (in addition to the quantity previously mentioned) 3,586,529 gallons.

The difference between this total and that of the rain water collected being the difference in stock at the end of the year 1925 as compared with that at the end of the previous year.

The price at which potable water is sold by the Council is as follows :—

To the Shipping at 2*s.* per 100 gallons.

To factories, hotels, private houses, &c., at 1*s.* 3*d.* per 100 gallons.

To Cattle Sheds, Electricity Works and Pumping Stations, at 10*d.* per 100 gallons.

From fountains delivered in butts (including 1*s.* 6*d.* per 100 gallons for cartage) at 2*s.* 4*d.* per 100 gallons.

During the years 1920/1921 a scheme was considered for the importation of potable water by means of conduits, from springs in the Spanish mainland. The scheme was not then considered advisable and no further developments have occurred since.

(*b*) *Brackish Water.*

Brackish water is used in Gibraltar for baths, flushing of sanitary conveniences, gullies, &c., fire extinguishing purposes, road watering and general sanitary purposes.

The water is derived from a number of comparatively shallow wells situated in the low lying district of North Front and the supply is considerable.

During the rainy season the water is comparatively fresh, but during the summer, the water levels are so reduced by pumping that infiltration from the sea takes place, and the salinity is greatly increased.

The Council run three pumping stations and maintain brackish water reservoirs at Moorish Castle, Calpe High Level, Europa Road, Engineer Road and Windmill Hill, which are situated at 210 feet, 343 feet, 208 feet, 410 feet and 523 feet respectively above sea level.

From these Reservoirs an intercommunicated system of pipes conveys the water by gravitation to every house, and the supply is constant.

The Council also pump brackish water for War Department purposes to the very top of the Rock, a considerable lift.

During the year 1925 the quantity of brackish water pumped and distributed for all purposes was 217,074,261 gallons.

The pumping and distribution systems are difficult and rather expensive but special circumstances exist.

During the last five years important improvements have been effected in the brackish water service, with the result

that the quality of the water has been improved and marked economies have been effected in pumping and distribution costs.

Within the before-mentioned period, the Brackish Water distributing mains have been extended to Catalan Bay Village, and old and defective mains in Market Lane, Main Street, Prince Edward's Road, Flat Bastion Road, Europa Road and Rosia Road, have been relaid. In the majority of cases improvements thereto as regards carrying capacity, interconnections, &c., have incidentally been effected. The stretches of mains laid or renewed during the last five years has totalled approximately 2,000 yards.

House service tanks on or in roofs are being gradually done away with and direct supply from the Council's mains to the house fittings is being instituted, but a much better class of internal pipe and fitting is desirable in Gibraltar, than those now in use.

The rate at which brackish water is sold to the public is $3\frac{1}{2}d.$ per 100 gallons.

The upkeep of main services, meters, &c., is costly owing to incrustation and corrosion.

(*c*) *Boiler Water.*

This water is pumped from very shallow wells at North Front, and has been sold to the commercial shipping arriving at the port of Gibraltar at the price of 9*d.* per 100 gallons. The price of this water has been increased to 1*s.* 0*d.* per 100 gallons for the year 1926.

The water is slightly saline and not so much subject to infiltration from the sea as in (*b*).

The quantity of water supplied during the year 1925 was 3,892,200 gallons.

During recent years improvements have been effected at the pier-head of the Watering Jetty at North Front which have greatly facilitated the means of supply.

A scheme is now under consideration for improving the quality of the water supplied from this source, and it is hoped that the investigations which are being made will lead to the desired result of bringing the quality of this water nearer to the standard of potable water.

ALGECIRAS WATER.

Potable water was imported from Algeciras during 1925 to the extent of 609,984 gallons. This water was supplied to the Shipping for dietetic purposes during May, June and July, *i.e.*, when the Council's stock of rain water was running low.

The water is conveyed from Algeciras in licensed tank boats which are inspected at intervals.

Samples of water are also taken from the tank boats and submitted for laboratory examination.

DRAINAGE AND SEWERAGE.

The whole of the sewage of Gibraltar eventually discharges into the sea at Europa Point Outfall. The main trunk sewer is 6′ 0″ × 4′ 6″ in size at the outfall and the average gradient is 1 in 1,200.

Numerous storm overflows exist in the line of main sewer and come into operation during time of heavy floods. The configuration of the Rock is such that very large volumes of storm water very quickly reach the lower levels and the sewers are taxed to the utmost. The rate of run-off is abnormal, and during heavy rains boulders and much silt reaches the sewers.

The sewage from the lowest levels is lifted to the main gravitation outfall sewer by means of a series of Shones' Ejectors.

During the last five years a large number of old and defective sewers have been entirely re-constructed. Improvements have been effected to many storm water drains and overflows and a lengthy new storm water drain has been laid in the central and congested part of the Town as a relief to the sewers in that locality. In consequence of these improvements, flooding which was once fairly general in certain areas during heavy rains, has now been almost eliminated. The main outfall sewer has been de-silted from Alameda Gardens to its outfall at Europa Point, *i.e.*, for length of nearly two miles.

Private house drains are continuously being tested and those found defective are relaid under notice. Much work is done in this direction.

REFUSE COLLECTING AND DISPOSAL, SCAVENGING AND HIGHWAYS.

REFUSE DISPOSAL.

The refuse collected from the Northern and Central Districts is incinerated at the Council's two-cell continuous grate Meldrum Destructor at North Front and the comparatively small quantity collected from the Southern District is tipped into the sea at Europa Point.

Steam generated at the Refuse Destructor is utilized for disinfecting purposes at the Council's Disinfecting Station which is situated in close proximity to the Destructor Buildings.

The disposal of tins is at present effected by passing them through the refuse destructor furnace for sterilization, after which, they are flattened and dumped in the portion of land which is being reclaimed from the sea near Inundation Road.

Up to the present time it has been found necessary to close down the Destructor for a few days each quarter, to effect repairs, boiler scaling, &c., and, during this period the whole of the refuse collected has been tipped into the sea. This unavoidable procedure has caused the beaches in the vicinity of the Destructor to become dirty and has given rise to complaint.

The Council is now effecting large improvements and extensions to their refuse destructor at a cost of about £7,500 and the works are nearing completion. The extensions comprise the following:—A new modern two-cell continuous grate Sterlin Destructor, Boiler, Regenerator, Carcase Chamber, De-tinning apparatus, Baling Press, Enclosing Buildings, Inclined Roadway, Foreman's residence, Workmen's Baths and Mess Room and an enclosed backyard for tins, &c. A portion of the land has been reclaimed from the sea and heavy sea walls have been built to protect the new buildings, roads, &c. When the new plant is in operation, continuous running will be possible.

REFUSE COLLECTION.

Each house is required to be provided with a suitable portable receptacle for house refuse which is collected by the Council's scavenging employés once a day in winter and twice a day in summer. The refuse carts are washed out after every trip by means of water hoses under great pressure, and are disinfected daily.

The nature of the district makes it absolutely uneconomical to collect the refuse from the greater part of the town by means of mechanical transport. With the view of effecting every possible improvement, the Council has, however, placed an order for a low loading line refuse collecting freighter car of five cubic yards capacity, which will speed up the collection of house refuse in the flat lower roads of the City.

STREET CLEANSING AND SANITATION.

The main routes on the level are split up into small sections and one sweeper with orderly boy and hand cart is attached

to each section. All other routes are swept twice or thrice per day by travelling sweeper gangs. During the summer months additional sweeping of roads is effected at late hours.

Street orderly bins are provided at strategic points to serve the street orderly hand carts, and this system, which has been lately extended, gives excellent results.

The new refuse collecting freighter car now on order will serve these bins, thus effecting a further improvement to the system.

Streets are well watered with brackish water several times every day by street watering valves and hoses and spreaders. The main thoroughfares are washed and scrubbed down with hoses under great pressure as required, and sometimes disinfectant is added. Street gullies receive much attention especially in summer when the water is changed daily.

During the last five years the roads, wherever possible, have been resurfaced and bitumen or tar used in so doing. The dust nuisance which was once very bad indeed (because untreated limestone was used for roadworks) has now been largely eliminated. The non-absorbent waterproof surfaces thus formed, make it possible to maintain such roads in a much cleaner condition. Extensive stretches of old surface water channels which were constructed of cobble stones have been replaced by dressed stone or concrete.

Several public passages and steps, notably Palace Gully, Castle Steps and Devil's Gap Steps, have been re-constructed. Footways along the main thoroughfares have also been extensively renewed, concrete, "Ironite" and silicate of soda being used in their construction. All these improvements have very much bettered the sanitary condition of the town and public thoroughfares and every opportunity of effecting further improvements is speedily seized as funds become available.

HIGHWAYS.

The Highways in Gibraltar are developing along the most modern lines but the problem is a very difficult one owing to the climate and humidity, and the large numbers of motors and omnibuses making use thereof, and to the fact that the roads are narrow and many of them very steep.

The Council makes its own Tar Macadam, Bricks, Pipes, &c., and quarries about 12,000 tons of road metal per annum.

Within the last five years, mechanically propelled traffic has considerably increased and the numbers of these vehicles now reach a high total. To meet the altered traffic conditions, a complete change in the surfacing of the roads has been

effected and bitumen and tar compounds have been largely used, where gradients permit, to supersede water bound methods.

The most noteworthy change in this direction has been the re-construction of the main road to Spain, on which there is a vast amount of continuous mechanical traffic, with Mexphalte and Spramex used by the grouting method, and carpetted with Guernsey granite chippings.

Bituminous and Tar constructions are slippery everywhere, but in Gibraltar, the humid Levanter winds add enormously to this difficulty. Grit depôts have been established and a motor driven gritting machine is in use.

Considerable sums of money have been expended during the last five years in improving the public highways, and of the many improvements effected the following may be cited as the most important:—

(*a*) Construction by the City Council of a War Memorial Promenade at Line Wall Road. This is perhaps one of the most important improvements from a purely public health point of view, as due to the demolition of a portion of the old high fortification walls facing the sea, it has created an additional "lung" in the centre of the City, of which it stood in great need owing to the congestion of high buildings in the vicinity.

(*b*) Construction by the City Council of a new road and bridge of 75 feet span joining Line Wall Road to Spain. This new road has proved to be a boon from a traffic point of view as by providing a new entrance to the town, it has ameliorated the dangerous traffic conditions near Casemates and Waterport Gate.

(*c*) Widening of the northern end of Main Street involving the demolition and re-construction of portions of Colonial Government and War Department buildings.

(*d*) Widening of Line Wall Road by bridging over Orange Bastion Casemates Yard.

(*e*) Improvement of cross fall at Line Wall Road.

(*f*) Construction of additional entrance arches and gates in old fortification wall near the north entrance to H.M. Dockyard, thus improving the means of ingress from Reclamation Road to Ragged Staff Road.

(*g*) Improvements effected at Corral Road by demolishing a disused raised roadway and constructing a considerably widened entrance to the City on a lower level.

(*h*) Deviation of the route of the roadway leading from Casemates Square to Line Wall Road, which had become dangerous due to the increase of fast traffic.

Minor improvements to roads have also been effected at the upper end of Cumberland Road; at Road to Spain near the Cross of Sacrifice; at Cumberland Road; at Main Street opposite Library Street; at Bomb House Lane; at Devil's Tower Road and at Naval Hospital Road.

In addition to the foregoing, the cutting off of dangerous corners has received much consideration and attention, and amongst others, improvements in this manner have been carried out at the following roads:—

1. Convent Place—Town Range.
2. Line Wall Road opposite new bridge over Orange Bastion Casemates Yard.
3. Top of Ragged Staff Road.
4. Line Wall Road—Hill to Casemates Square.
5. Town Range—Hargraves Parade.
6. Europa Road near Prince Edward's Gate.

Further schemes for road improvements are under consideration.

During the last five years a number of War Department Roads have been declared Public Highways, thus increasing the Council's responsibility in this connection.

BATHS.

The Council maintains slipper baths, hot and cold, at Irish Town, but they are not patronized by the public as much as was hoped for.

Three sea bathing establishments are also provided and maintained. Better and more extended accommodation in this connection is necessary.

Sea bathing is also indulged in at Catalan Bay, Sandy Bay Rosia Bay and Camp Bay.

SANITARY CONVENIENCES.

A number of public sanitary conveniences exist at various parts of the City. During the last five years new modern conveniences have been constructed at Line Wall Promenade, Castle Street and Cumberland Road. In constructing the latter one an improvement was incidentally effected to the public highway.

During the same period the public conveniences situated at Fish Market Road, at the top of Ragged Staff Road and near the Theatre Royal have been reconstructed and improved on modern lines, and one other is in course of construction at Crutchett's Ramp.

CAB HORSE WATERING TROUGHS.

The Council maintain the pumps, wells, &c., and keep in order several such places to provide water for cab horses.

DOG TROUGHS.

The Council provide and maintain dog troughs at frequent intervals, and in summer keep them supplied three times a day with water for drinking.

FIRE STATION.

Within the last five years great improvements have been effected to the accommodation for the Fire Brigade personnel and material. A disused military building was taken over by the Council and structural alterations effected to convert same into a Fire Station and Quarters in place of the then existing Station which was considered too small for the purpose. Further extensions to this building have been effected during the year 1925. A motor fire tender has also been installed and great improvements made to the general fire fighting efficiency. A new fire escape ladder, and a small portable pump for carrying up ramps in the higher levels, are on order.

ELECTRICITY WORKS.

A new sea water intake, a reinforced concrete chimney shaft, a reinforced concrete coal store have been constructed recently, and a coal tunnel is about to be driven and large weighbridge provided.

HOUSING.

The housing problem in Gibraltar is one that bristles with difficulties, and not much real progress has yet been made.

Legislation which was formerly in force restricting owners from increasing the number of storeys of their buildings has now been rescinded. This has in some measure improved the housing problem.

Private building developments have during the year continued to increase and many houses have been remodelled.

Important repairs have been carried out to many houses with the object of providing better and more extensive accommodation.

The Council resolved to institute a systematic inspection of all premises in Gibraltar and the Medical Officer of Health was instructed to carry out this policy.

Repairs of an important nature have been carried out in houses in the following localities :—

Market Lane.
Engineer Lane.
Town Range.
Bell Lane.
Castle Street.
Road to the Lines.
Bruce's Gully.
Arengo's Palace Lane.
Wilson's Ramp.
Main Street.
Engineer Road.
Parliament Lane.
Governor's Parade.
Horse Barrack Lane.
Irish Town.
Castle Road.
Cumberland Road.
Flat Bastion Road.

SANITARY INSPECTION OF THE DISTRICT.

Statement of chief defects dealt with among Civil habitations.

Description of Defects.	Number of houses in which defects were found.	Action taken.		Result.	
		Statutory notice served.	Justices' Order applied for.	Defects remedied.	Pending at end of year.
"A"—WATER SUPPLY.					
Inlets to underground tank exposed to pollution	60	60	—	60	—
Underground tank cleaned ...	19	19	—	19	—
Tanks to be made insect proof...	104	104	—	104	—
Water fitting defective	46	46	—	46	—
"B"—SEWERAGE.					
Soil pipes leaky	8	5	—	5	3
Soil pipes improperly ventilated	4	4	—	3	1
House drains defective	17	13	—	13	4
Fittings insanitary	106	101	—	102	4
Air inlet defective	25	21	1	21	4
W.C. choked	23	23	—	23	—
"C"—LIVING ROOMS.					
Damp	9	9	—	4	5
Badly lighted and ventilated ...	10	5	1	6	4
Roofs leaking	18	11	1	11	7
"D"—KITCHENS.					
Fireplaces without flues	1	1	1	1	—
Floors defective	6	3	—	3	3
Sink and waste pipes defective...	1	1	—	1	—
"E"—YARDS.					
Badly paved	2	2	—	1	1
Surface drain traps defective ...	10	10	—	10	—
Dirtily kept	11	11	—	11	—
"F"—PREMISES GENERALLY.					
In bad repair	2	2	1	2	—
Deficient of refuse bin	55	55	—	53	2
Wall plastering defective	25	18	1	17	8
Eavesgutters defective	112	102	1	103	9
Woodwork defective	12	10	1	6	6
Other minor nuisances	82	75	—	81	1
Totals	768	711	8	706	62

Total number of statutory notices served 711
Defects remedied 706
Pending on 31/12/25... 62

COMMON LODGING HOUSES.

There are four Common Lodging Houses in Gibraltar.

They have been maintained in good sanitary condition during the year.

No cases of infectious disease occurring in them have been brought to notice, there has been no overcrowding, and the Bye-Laws have been strictly observed in all cases.

LIST OF ORDINANCES, BYE-LAWS AND REGULATIONS RELATING TO PUBLIC HEALTH IN FORCE IN GIBRALTAR.

ORDINANCES—

"The Public Health Ordinance, 1907," embodying the following sanitary provisions :—

Sewage and Drainage.
Sanitary Conveniences.
Scavenging and Cleansing.
Water Supply.
Provisions for the protection of Water.
Regulation of Cellar Dwellings.
Common Lodging Houses.
Nuisances.
Houses let in Lodgings and in separate Tenements.
Offensive Trades.
Unsound Meat, &c., Food and Drugs.
Infectious Diseases—Provisions against Infection.
Prevention of Epidemic Diseases.
Mortuaries.

"The Vaccination Ordinance, 1887," providing for the compulsory vaccination of all children born in Gibraltar within three months after birth, and revaccination on attaining the age of 12 years.

"The Tobacco (Chopping) Ordinance, 1922," prohibiting the chopping of tobacco otherwise than by machinery.

"The Midwives Ordinance, 1907."

"The Quarantine Ordinance, 1895."

"The Diseases of Animals Ordinance, 1925."

BYE-LAWS —

Bye-Laws with respect to Nuisances, 1893.
Bye-Laws with respect to Buildings, 1893.
Bye-Laws for regulating the supply of Brackish Water for Flushing and Cleansing purposes, 1905.
Bye-Laws for the Control of the Milk Supply, 1913.
Bye-Laws made for the purpose of prescribing and regulating the seizure, detention, &c., of deceased cattle or animals, 1914.
Bye-Laws with respect to Nuisances, 1915.

Bye-Laws for the prevention of danger arising to public health from the importation, &c., of ice creams, 1915.
Bye-Laws made for regulating the supply of water to water-vendors and other persons, 1918.
Bye-Laws made for the prevention of danger arising to public health from the importation, preparation, &c., of food and drink intended for human consumption, 1918.
Bye-Law for the prevention of danger arising to public health from spitting in public places, 1921.
Bye-Laws for the prevention of overcrowding in premises, houses or rooms let as dwellings, 1921.

RULES.

Rules for regulating the burial of persons who have died from infectious disease, 1918.
Rules made in accordance with "The Quarantine Ordinance, 1885," for regulating the medical inspection of ships arriving in Gibraltar with cases of Plague, Cholera, Yellow Fever, and subsequent procedure whilst detained in quarantine.
Rules for regulating the practice of Midwifery in Gibraltar, 1924.
Regulations made under the "Diseases of Animals Ordinance, 1925.

FOOD.

A considerable amount of work has been done by this Department during the year in carrying out inspections, sampling, &c. This work is most important having regard to the risks to health in the form not only of definite disease, but of less obvious interferences with bodily welfare from contamination and adulteration of foodstuffs.

Of the definite diseases the most outstanding are Mediterranean Fever and the Typhoid group.

The chances of contamination of food in Gibraltar by dust, flies and in other ways are very great.

It is impossible to ensure complete freedom from contamination at all stages, but every effort is made to ensure that due care is taken to reduce the risk of contamination as much as possible.

In the sampling of food what is aimed at is that the composition of the article is satisfactory, that in fact, the consumer is not paying for an inferior article.

MILK SUPPLY.

The milk supply of Gibraltar is both local and imported.

The local supply is small in amount chiefly owing to the limited amount of grazing available, and is derived from:—

4 herds of Cows consisting of 39 animals.
8 „ „ Goats „ „ 195 „

All goats in Gibraltar are kept on a register and examined (serologically) at intervals.

A quarterly inspection of all cowsheds and goatsheds is carried out by the Veterinary Adviser to the Council.

The supply imported from Spain is boiled before retail (Undulant Fever).

SLAUGHTER HOUSES AND FOOD INSPECTION.

The Slaughter Houses and surroundings when visited during the year were found to be clean and in a satisfactory sanitary condition.

The number of animals slaughtered during the year was as follows :—

Cattle	7,423
Sheep	5,574
Pigs	1,217

The work of food inspection in Gibraltar is carried out in a very methodical manner, and special accommodation is provided where unsound food may be examined.

During the year the opinion of the Inspector of Food was requisitioned on 98 occasions.

The following table shows the causes for which carcases or portions of carcases were condemned as unfit for human consumption, and ordered to be destroyed :—

CATTLE :

Disease	*In whole*	*In part*
Tapeworm	23	87
Tuberculosis	1	1
Emaciation	—	1
Cowpox	1	—

SHEEP :

Hæmorrhage	1	—

PIGS :

Hæmorrhage	1	—

Inspections were made during the year of all cowsheds and goatsheds in Gibraltar by the Veterinary Adviser who, in addition to seeing that all animals were free from disease, reported on the condition in which the sheds were kept.

The conditions generally were satisfactory.

WORK IN CONNECTION WITH THE PORT MEDICAL DEPARTMENT.

The Port of Gibraltar being in direct communication with almost all countries in the world runs some danger of the importation of infectious disease.

The general outline of the procedure adopted in carrying out the medical inspection of ships is as follows :—

A ship on entering the Bay is met by the Boarding Officer. If it is found that it has come from an infected port and is still within the quarantine period, or has a suspected case of infectious disease on board, or not carrying a ship's surgeon, has any illness amongst the crew, it is placed in strict quarantine pending the visit of the Port Surgeon. Depending on his recommendation the ship either remains in quarantine or is admitted to pratique. Should a ship arrive in the Bay having a case of Plague, Cholera, Typhus, or Yellow Fever on board, she is placed in strict quarantine, all communication with the shore or other ships being prevented by a patrol of Health Guards and Marine Police, the instructions issued by the Board of Health being carried out as far as applicable in each individual case. Other cases of infectious disease may be landed on the recommendation of the Port Surgeon, the cabins and bedding being disinfected after their removal.

Disinfection of the holds of ships is not undertaken.

All cases from the Bay requiring hospital treatment are removed in the Ambulance Barge, and on being landed, conveyed to hospital in the City Council's Motor Ambulance. When landing cases every care is taken to prevent them coming into contact with the public.

INFECTIOUS CASES.

All cases of acute infectious disease landed from ships in the Bay are removed in the "special ambulance" to the Isolation Block of the Colonial Hospital, Small Pox cases being taken in a special ambulance to the Isolation Hospital, North Front.

DISINFECTING AND CLEANSING.

Articles requiring disinfection are removed by special conveyance to the City Council's Disinfecting Station, North Front, where a steam disinfector is provided for carrying out this work.

AMBULANCE BARGE.

An Ambulance Barge is provided for removing cases from ships in the Bay.

*AMOUNT OF SHIPPING ENTERING THE PORT OF GIBRALTAR DURING THE YEAR 1925.

		Number.	Net Tonnage.	Number inspected.	Number left in quarantine.	Number admitted to Pratique.
British	Steam	1,518	3,918,028	2†	—	2
	Sailing	52	4,651	—	—	—
	Total British	1,570	3,922,679	2	—	2
Foreign	Steam	2,652	2,589,375	1‡	—	1
	Sailing	510	20,114	—	—	—
	Total Foreign	3,162	2,609,489	1	—	1
	Total British and Foreign	4,732	6,532,168	3	—	3

*Information kindly supplied by the Captain of the Port.

†Had cases of Small Pox on board, landed into Isolation Hospital.

‡Foul Bill of Health from Tunis.

Instructions issued by the Gibraltar Board of Health with regard to the procedure to be adopted in cases of vessels arriving at Gibraltar with Plague or suspected Plague on board and vessels coming from infected ports :—

(1) WAR SHIPS.

All nationalities to be dealt with as occasion arises.

(2) MERCHANT VESSELS INCLUDING TROOP SHIPS.

(*a*) Passenger Steamers, with passengers, mails, cargo to land and requiring coal, water and stores.

(*b*) Passenger Steamers, with no passengers or cargo to land but requiring coal, &c.

(*c*) Transports with troops and families to land and requiring coal, water and stores.

(*d*) Cargo Steamers requiring coal, water and stores but no cargo to land.

(*e*) Steamers or Sailing Vessels with cargo to discharge.

(*f*) Vessels from an infected Port under eight days but all well on board, with passengers, mails and cargo to land.

All vessels with Plague or suspected Plague shall be kept in strict quarantine.

No person from shore except Medical Officers shall be allowed on board.

No passengers or any other person even if Gibraltar were the port of disembarking shall be allowed to land until the period of incubation has elapsed, *i.e.*, 1 to 8 days, and the vessel admitted to free pratique by the Port Surgeon.

(3) PROCEDURE IN THE EVENT OF A VESSEL REQUIRING COAL, WATER AND PROVISIONS IN QUARANTINE.

Guard Boat with guard to patrol around vessel.

She shall be coaled from lighters only, shore labour may be allowed in the lighters. No labour allowed on board.

Each lighter to have two Health Guards.

All lines from the lighter to the vessel to be well tarred, for at least six fathoms from the end which is made fast to the ship, and to the satisfaction of the Port Authorities.

No lighter to remain alongside after dark.

Provision lighters, waterboats and launches to have one Health Guard on board and all ropes made fast to the vessel to be well tarred the same as for the lighters.

(4) VESSELS ARRIVING FROM AN INFECTED PORT UNDER EIGHT DAYS BUT ALL WELL ON BOARD.

She shall be kept in quarantine and no one allowed to land or cargo to be discharged until the period of incubation has elapsed and vessels admitted to pratique.

The master shall have the right to leave the Port if he so desires and to take coal, water and provisions on board under the same conditions as if Plague existed on board.

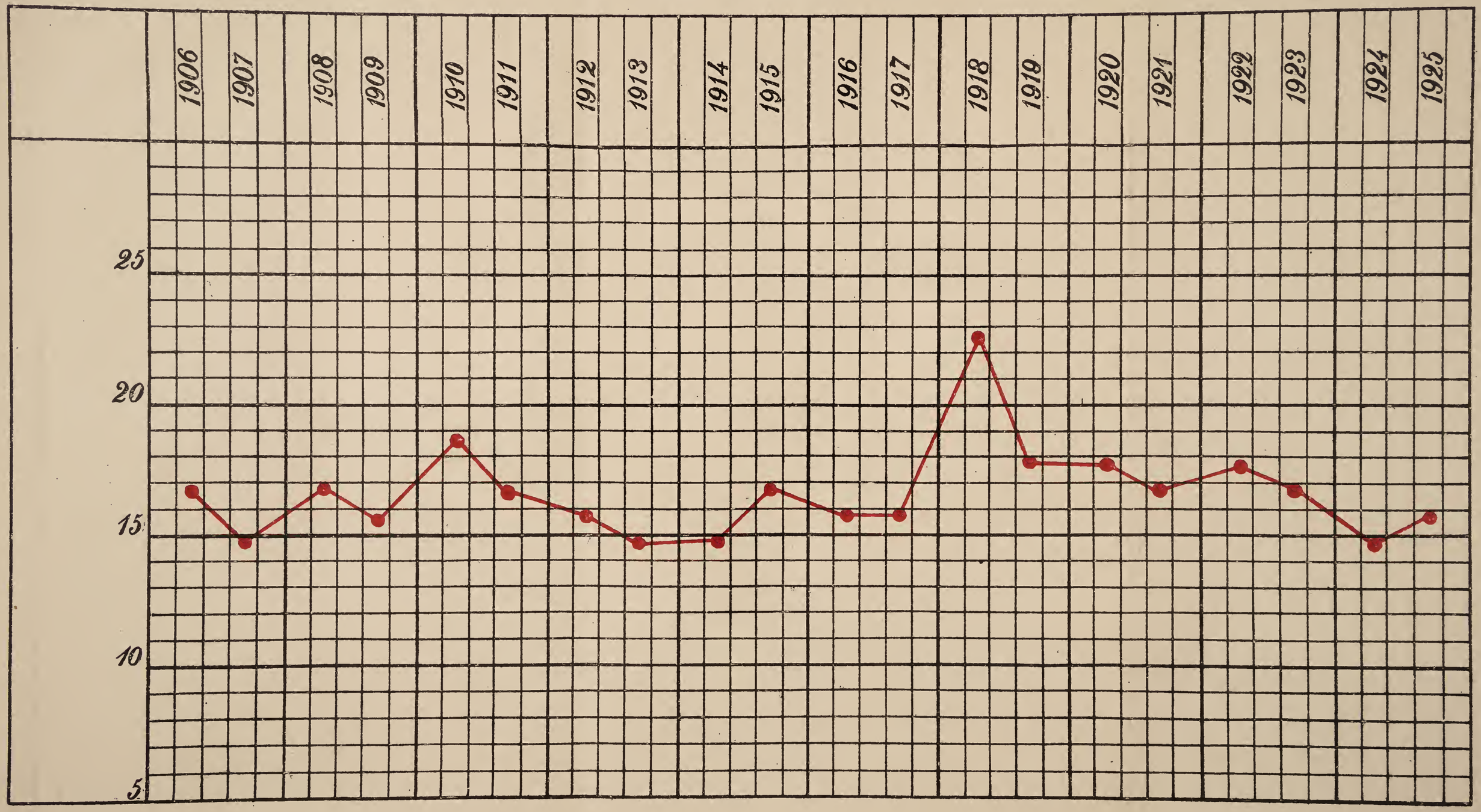
If any death occurs on board a vessel in quarantine, the vessel shall proceed to sea and bury the body not less than three miles south of Europa Point.

Gibraltar, 25th May, 1922.

CHART I

General Death Rate per 1,000 of Total Civil Population, Gibraltar, for the Decennial periods

1906 - 1915 and 1916 -1925

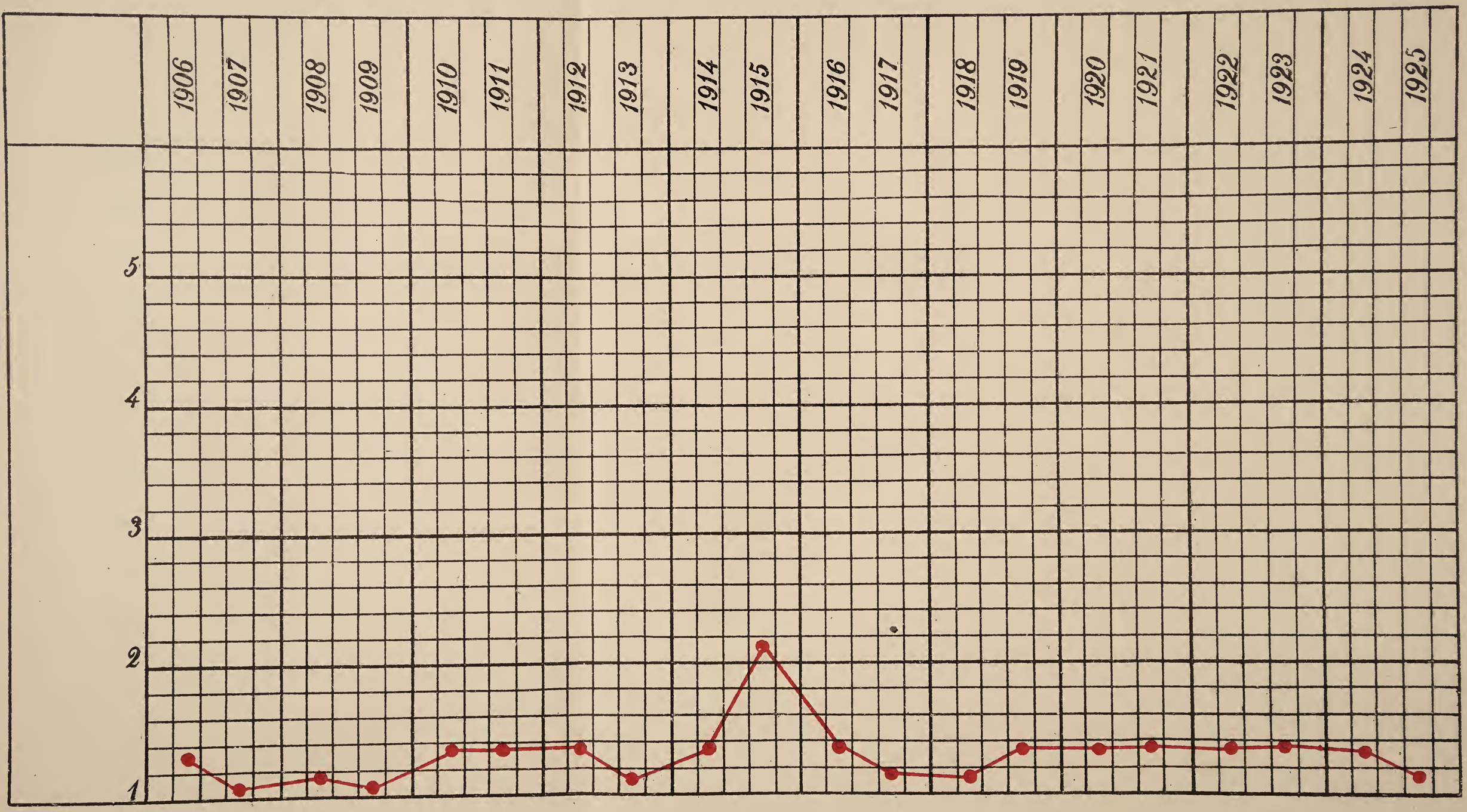


AVERAGE	1906 - 1910	16.17		1916 - 1920	17.76
	1911 - 1915	15.53		1921 - 1925	16.28
	1906 - 1915	15.85		1916 - 1925	17.02

CHART II

Zymotic Mortality per 1,000 of Total Civil Population, Gibraltar, for the Decennial periods

1906 - 1915 and 1916 - 1925



AVERAGE	1906 - 1910	.80	1916 - 1920	.99
	1911 - 1915	1.28	1921 - 1925	1.36
	1906 - 1915	1.04	1916 - 1925	1.18

APPENDIX

TO THE

ANNUAL REPORT

ON THE

HEALTH OF GIBRALTAR

FOR THE YEAR

1925.

REPORT ON MOSQUITO CAMPAIGN IN GIBRALTAR DURING THE SUMMER OF 1925.

A Municipality can set about the elimination of mosquito breeding places by one of two plans of which the first is based upon legal powers, and the second on voluntary action.

To carry out the first plan it is necessary to make a law requiring that every collection of water in the area shall be mosquito proof, or in some other way kept free from the possibility of being a breeding place, and that, as regards such collections of water as are on private land, the duty of preventing them from becoming breeding places shall rest on either the householder or the owner of the premises.

This law being made the Municipality sets an example by dealing thoroughly with all breeding places that are under its own control, and afterwards (when a reasonable period since the passing of the law has elapsed), it sends trained inspectors from house to house to report on the condition of private water collections as to proofing, and as to the presence or absence of larvæ, and on the reports of these inspectors it acts as to 'noticing,' and when necessary, taking legal action against the tenant or owner, according as the responsibility rests.

This is the plan that has been adopted wherever anything more than a purely temporary success against domestic mosquitoes has been attained, and it need not necessarily involve any prosecutions, or other apparent hardships.

In the second or voluntary plan of campaign, the Municipality itself undertakes all the work necessary for the elimination and destruction of breeding places, the householders and owners of land assisting only in so far as they can be brought to do so by persuasion, instruction and example.

In the absence of an Ordinance relating to mosquito elimination, this has been the method followed in Gibraltar.

REASONS FOR CAMPAIGN.

Active measures are specially necessary against household and domestic mosquitoes which include the 'carrier' of Yellow Fever and Dengue Fever.

Americans have recently confirmed the finding that *Aëdes argenteus* is the 'carrier' of Dengue Fever. This was originally proved by workers in Australia.

Quite apart from the desirability of obtaining permanent safety against disease, measures are advisable because they are known to afford one of the best and quickest means of ridding a locality of dangerous and troublesome mosquitoes.

NOTES ON DOMESTIC OR HOUSEHOLD MOSQUITOES.

The strictly household mosquitoes live in intimate association with man and his dwellings and their habits have become very closely adapted to his mode of life. As a rule their whole life is spent within or in the immediate vicinity of the house in or near where they were bred, and their breeding places are of a particular kind found in the environment of human beings only. Their habits have become very fixed and definite, and they can only very slightly adapt themselves to changed conditions.

PREVALENCE.

Mosquitoes increase considerably in number during the summer months especially after rain. Few are seen during the winter, those caught in houses during this winter being entirely female *Culex pipiens.*

Mosquitoes (*Theobaldia longeareolata*) have been found breeding in the Upper Rock and North Front area during this winter.

ANTI-MOSQUITO WORK.

In order that anti-mosquito work may be successfully carried out in a locality it is necessary to ascertain :—

(*a*) The names of those species that are dangerous and of those that are troublesome.

(*b*) The life history and habits of each.

(*c*) The practical methods which, in view of the knowledge collected under these headings, would be most likely to bring a reduction of the different species.

KINDS OF MOSQUITOES PRESENT.

In 1889, Major Birt collected 60 specimens of mosquitoes from various localities in Gibraltar, and these were reported by Mr. Theobald as all "Culex."

The varieties were, *Culex spathipalpis* (known as the Dove Mosquito), *Stegomyia fasciata,* and *Culex pipiens.*

Colonel Dansey-Browning whilst Medical Officer of Health, also found these species.

During the past summer out of a large number of mosquitoes sent to the Royal Army Medical College for identification, the following species only were found :—

(i) *Aëdes argenteus.*
(ii) *Culex pipiens.*
(iii) *Theobaldia (Alleotheobaldia) longeareolata (Culex spathipalpis)*

so it appears that these are the only varieties which are breeding in Gibraltar at present.

There is no record of Anophiline mosquitoes having been found in Gibraltar, although they are found in the neighbouring localities of Spain.

DETAILS OF THE LIFE, HISTORY AND HABITS OF SPECIES COMMON IN GIBRALTAR.

AEDES (STEGOMYIA) ARGENTEUS.

This species seldom lays all the eggs of a generation on the same collection of water, but usually lays a few on one collection and a few on another, a few on a third and so on sometimes infecting, in this way, four or five collections of water with eggs from the same batch. This habit gives this species a great advantage over mosquitoes whose eggs of the same generation are joined together in the form of a raft and must all be laid on one collection of water.

The eggs are laid a little above the margin of the water on the sides of the receptacle, commencing from 1 to 7 days after feeding.

Breeding Places—This species almost exclusively breeds in artificial water containers such as household utensils, water storage receptacles, roof gutters, etc. This is of great importance with regard to the scope and expense of anti-larval measures against the species. Great importance must be attached to breeding places immediately connected with houses and the domestic arrangements of the people.

The kind of water in which *Aëdes argenteus* breed is almost always clear and free from mud; it is usually rainwater or the water of a public supply, but may be brackish.

The description of the breeding places shews that as regards this feature of its life history, the species is highly specialised, the specialisation having reference to the character of the water and its distance from human dwellings. The water is almost always of a kind that could be used for drinking purposes by human beings, and is moreover, contained in artificial receptacles of which practically all are situated either inside dwellings or in their immediate vicinity, and the great majority are either vessels used for storing clean water in the household or such as can, designedly or by accident, collect clean rainwater, or the water from a public supply.

Occasionally the larvæ are found in ditches, gullies, drains, etc. Such adaptability whilst being sufficient to prevent the complete extermination of the species is insufficient to prevent its reduction to such a degree that special methods are necessary to detect its presence.

Under such circumstances it is probable that complete development rarely takes place.

They do not like muddy water, and will not breed in cesspools.

The eggs develop in from 2 to 8 days into larvæ which in about a week become pupæ. These in turn develop in about two days into the fully formed insects.

The life cycle from egg to adult of the *Aëdes argenteus* may be completed in so short a time as 7 days (James, Colombo), (10 days, Otto & Newman, Brazil), although the period is usually given as 12 to 14 days.

The distribution of this mosquito is limited to the area between 38° North Latitude and 38° South Latitude, as in order to become established it requires a temperature of above 26° C. for a considerable period of the year. Above and below these boundary lines the cold weather is inimical to the life of the insect. In the tropics it is present all the year round. In the sub-tropics, where the colder weather brings frost, some of the females hibernate through the winter. Eggs have been found to retain their vitality for five months or even longer out of water, and probably this is the usual method of surviving through the winter.

In anti-mosquito measures premises must be visited at least once in every seven days until the period necessary for development from egg to adult has been definitely ascertained for that locality.

As regards the habits of the adult insect, the most important fact is that *Aëdes argenteus* is essentially a domestic (strictly household) mosquito which lives in close association with man, obtains its food from him and, except in very unusual circumstances, remains throughout its life in the immediate vicinity of the dwellings in or near where it was bred. Although their flight is extremely limited they may be carried great distances by ships and, occasionally, by trains.

Only the female insects suck blood, and the habit is more actively carried on during the daytime, but individuals that have not fed will continue their efforts to get a meal of human blood far into the night. In this endeavour this species is more persistent than any other. It will only bite readily at a temperature of 18° C. or higher, and is most active at 28° C.-30° C.

For the purpose of laying its eggs it often flies no further than the nearest flower vase or earthenware vessel, and if there are none of these articles in the room it seeks out other collections of stored water inside the house or within its immediate precincts, never flying further than is necessary. In this respect it differs markedly from other mosquitoes.

Considering all the habits of this species it may justifiably be described as a strictly household insect whose habits have become specialised towards a mode of life in which it is in considerable degree predatory on man alone. This habit or instinct is so fixed that there can be no doubt that if public opinion permits the requisite measures to be taken within and in the immediate vicinity of dwellings, this species is easier to eradicate than any other.

CULEX PIPIENS.

One of the commonest mosquitoes which breeds in water-butts, tanks, and other water receptacles in the proximity of dwelling houses; also in any foul water. It is known as a domestic mosquito partly because its larvæ are often found in or near houses, and partly because the adult females hibernate in cellars, attics, &c., coming out in the early spring to lay their eggs. In the autumn it congregates in enormous numbers in cellars and outhouses, stables, etc., where it passes the winter in a sluggish, more or less "hibernating" condition. It enters houses freely and may be found resting on walls, curtains, ceilings, etc., of living rooms and bedrooms. If the rooms are warm it may bite viciously.

On warm days in the early spring it again becomes active and leaves its winter quarters to lay its eggs on the nearest collection of water. A week or two later its larvæ may be found in almost every natural or artificial collection of stagnant water whether clean or foul, fresh or brackish. The first annual brood of adult insects emerges in the early spring, and subsequent broods emerge at irregular intervals during the summer. In the late autumn all eggs which have not hatched into larvae, and all larvae which have not pupated, as well as all male adult insects, die, so that the species survives the winter in the adult female stage only. Winter is therefore the period of the year during which measures against the species are likely to be most effective, and particularly so because at that season the female insects may be found and killed in great numbers in places in which they congregate.

The following methods are employed for this purpose:—

(*a*) Catching and killing the insects separately.

(*b*) Fumigation. This is sometimes suitable for cellars, outhouses, etc., where all entrances and exits can be effectively closed.

Sulphur 1lb. for every 1,000 cubic feet.

Formalin.

(*c*) Spraying—Lysol or Cresol 3%.

(*d*) Limewashing.

The following extract in regard to this species taken from "A Handbook of British Mosquitoes" by William Dickson Lang, M.A., Sc.D. affords much useful information:

"*Culex pipiens* is quite the commonest British gnat, and is abundant everywhere. It is the more noticeable, as it frequents houses and, with *Anopheles maculipennis* and *Theobaldia annulata*, spend the winter as an impregnated female fly in the shelter of buildings. Any collection of water that is not too foul serves as a breeding place. Water-butts and zinc cisterns, as well as ponds in various situations—in fact, any stagnant water appears to satisfy the larvæ of *Culex pipiens*. One unusual situation is recorded by A. Macdonald, Jr., from Culross, Fifeshire. He found larvæ in collections of water in a disused saw-pit in what had been a copse situated on a moor; but the trees had lately been cut down, so that where the water was there was no shelter at all. The water was dark-coloured, but clear. Foreign records shew *Culex pipiens* larvæ to be still less particular in their breeding places. H. Dyar, L. Howard and F. Knab (1915, Mosquitoes of North and Central America and the West Indies, vol. iii., p. 367), say that the larvæ are able to thrive in highly polluted water, and quote catch-basins of sewers and water highly charged with the refuse from slaughtered animals as localities for them. They also quote Ficalbi as recording the larvæ of *Culex pipiens* from fonts of consecrated water in churches and in sulphurous water; and J. Waterson (1918, Bull. Ent. Research, vol. ix, page 10) found them in Macedonia in an artificial washing-pool amid soap-suds, and in extremely foul-smelling, but quite clear, rocky pools of a sewage effluent. It is probable, then, that in England *Culex pipiens* is no more particular in its breeding places, but for lack of observation it is not credited with such foul propensities.

C. pipiens occurs throughout Europe, in northern Africa, E. Africa, Madagascar, and restrictedly in N. America. From the last-mentioned fact, Dyar, Howard and Knab consider that the species has been introduced into N. America from Europe.

It is worthy of note that *Culex fatigans*, a species so much resembling *Culex pipiens* that the only satisfactory characters for distinguishing the two species are in details of the male genitalia, has a very wide geographical distribution in the warmer parts of the world, and has been recorded (F. V. Theobald, 1901, a Monograph of the Culicidæ or Mosquitoes, vol. ii. p. 154) from Spain and Portugal. Now it is evident that, since the two species are so much alike that it needs a microscope-preparation before their differences can be seen, it may easily happen that *Culex fatigans* may be present in a country without being detected; for if *C. pipiens* is common, *C. fatigans* will not be sought. Also it is possible that if *C.*

fatigans were to extend its range it might for a long time be unnoticed. The practical interest of *C. fatigans* is that it conveys (and presumably can transmit) the worms that cause filariasis and the organism that causes dengue fever. It is desirable, therefore, that *C. pipiens* should be closely watched in case *C. fatigans* extended its range; and the possibility should not be forgotten of *C. pipiens* acquiring the disease bearing habits of *C. fatigans* where the range of these species overlap, and by these means spreading the diseases concerned over its own range."

THEOBALDIA LONGEAREOLATA.

This species is very prevalent and occasionally found in houses. It has been found breeding in tanks and collections of water, fresh and brackish, all over the Rock. During this winter larvæ of this mosquito have been found on several occasions.

DISTRIBUTION IN OTHER PARTS OF THE WORLD.

A Mediterranean species, common throughout North Africa and in the Canary Islands, Palestine, Syria, Macedonia, Italy and south and central France. In the south, it is recorded from the Sudan, East Africa and Cape Colony. In the east, from Transcaspia, Mesopotamia, Persia and the Punjab.

SEASONAL PREVALENCE.

Breeds throughout the year in Gibraltar. Investigation is being carried out as to whether breeding diminishes during the hot weather.

BREEDING PLACES.

Breeds in any collection of water, fresh or brackish, often in foul water. The larvæ is frequently found with *Culex pipiens.*

This species does not often enter houses and is said not to bite. Its importance as a carrier of disease is probably nil.

Breeding places exist in the Neutral Ground, and mosquitoes are abundant in the neighbouring localities in Spain; further investigation is required as to whether mosquitoes from these areas come into Gibraltar.

It will thus be seen that much definite and complete information is available, and this is of much aid in dealing with the mosquito pest in Gibraltar although further investigation is necessary with regards to the various influences of local conditions.

During the spring it is intended to observe the earliest date at which *Aëdes argenteus* and *Culex pipiens* commence breeding, and the period necessary for development from egg to the adult insect, and to employ methods of enumerating the adult insects as well as the usual methods having reference to the prevalence of larvæ.

Breeding in the vicinity of dwellings appears to cease in November but further investigation is required on this point.

BREEDING PLACES.

Water Storage Cisterns.—Nearly every house in Gibraltar is provided with an underground tank for storing rainwater collected from roofs and catchment areas, and most houses have a brackish water storage tank on the roof, although these latter are being gradually abolished, advantage being taken of the facilities afforded by the City Council for obtaining a direct supply. Many of these tanks have been found defective or inefficiently screened and readily become breeding places for mosquitoes.

Particular attention has been paid to tanks during the season, the number inspected being :—

Fresh water	218
Brackish water	356
Total	574

Of these 574 tanks, 111 were found not to be mosquito proof. Notices were served and re-inspections made to see that all had been rendered mosquito proof or that the tanks were removed.

The difficulty of using fish for the brackish water tanks on the roofs of houses is that the tanks are difficult of access and a ladder is often necessary ; that the metal screening of the overflow pipe often perishes and the fish are carried into the pipe. The tank has to be examined at regular intervals to see if the fish are alive; this necessitates removing the lid and often renders it non-mosquito proof. The policy also entails the employment of additional staff.

Flushing tanks of water closets when regularly used are not breeding places, but in unoccupied houses they are nearly always infected as may be the water closet basins and the syphon traps of waste water pipes from baths, sinks, and lavatory basins.

Wash Tubs—Wooden wash tubs are in general use in Gibraltar, and in order to prevent them falling to pieces it is necessary to keep water in them constantly. They are a continuous source of mosquito breeding, Out of 1,104 breeding places dealt with during the season, 512 were wooden wash tubs. This problem could be easily solved by the substitution throughout Gibraltar of galvanized iron receptacles for wooden tubs, the water being emptied after use and the tubs turned upside down or hung on the wall to dry. This method has already been adopted to a limited extent in Gibraltar and is a very popular one, and most efficacious from an anti-mosquito point of view.

Barrels used for storing water and not screened effectively.

Gullies have been a frequent source of mosquito breeding, but this has been largely reduced by regular disinfection.

Roofgutters and Eavesgutters connected by downpipes to surface drains—These are laid either level or with a slight slope towards the downpipes, and nearly always retain sufficient water after rain to make them breeding places especially of *Aëdes argenteus.* Many gutters are very difficult of access even with long ladders.

Tinajas—Earthenware vessels for storing water for domestic use are very frequently found to be breeding mosquitoes. This is entirely due to lack of efficient screening by the provision of a properly fitting cover.

Flower Pots, Vases, Tins, Fire Buckets, Saucers—have all been found on occasions to be breeding places of mosquitoes.

Broken bottles fixed on walls have also, after rain, become breeding places.

Water Barges, Boats and Lighters in the harbour have been found on occasions to be breeding mosquitoes.

Mosquito larvæ have never been found in the Inundation (a large collection of brackish water at the North Front) although repeated searches have been made. This place is well stocked with fish, and there are also numbers of duck on the water.

DETAILS OF CAMPAIGN.

Personnel.—One Sanitary Inspector was fully employed on anti-mosquito work during the summer.

Men employed:—

6	men	from	4/5/25	to	13/6/25
10	„	„	15/6/25	„	20/6/25
12	„	„	22/6/25	„	4/7/25
18	„	„	6/7/25	„	22/8/25
17	„	„	24/8/25	„	14/10/25
16	„	„	15/10/25	„	17/10/25
15	„	„	19/10/25	„	31/10/25

The intensive campaign for 1925 commenced on the 4th of May and terminated on the 31st October, 1925, and four men only were retained for work during the winter.

PLAN OF CAMPAIGN.

For the purposes of the campaign Gibraltar was divided into areas, the five Sanitary districts, *i.e.*, South, Town Upper, Middle, and Lower, and North Front. These were divided into 16 sub-districts as shewn in Appendix "A." The size of the areas are arranged to ensure that every house is thoroughly inspected once weekly.

The men employed worked in pairs, and were provided with special instructions. Appendix "B."

They visited all premises in the area allotted to them once a week. They were specially instructed in the collecting of larvæ, and in the methods of making a thorough examination of premises, and were provided with a note book. A thorough investigation of each house and surroundings was carried out, every part being searched for water-holding receptacles and other breeding places of every kind, the list and numbers of potential breeding places being recorded.

For ensuring continuous and thorough work frequent inspections at different times of the day were made by the Sanitary Inspector employed on the anti-mosquito campaign, and occasional inspections by the Medical Officer of Health.

The men brought their notebooks to the Office daily after work when the results were checked and entered up by the Sanitary Inspector, and the work of the day discussed, the Medical Officer of Health frequently being present to give such instructions as might be possible, and generally, to see that the work performed was satisfactory and complete.

Whenever possible water is got rid of in breeding-places; sometimes in cases of water required for domestic uses it is strained through fine muslin.

The men are provided with watering cans and disinfectants for dealing with gullies, etc., and ladders for the inspection of tanks, gutters, etc.

Each man carries a copy of instructions detailing their special duties, a questionnaire on anti-mosquito work, and a certificate of identification; also a badge which is always worn when on duty.

OBJECTIONS.

There were twenty-seven refusals of admission into tenements on various grounds, some were persisted in weekly. All the objectors were spoken to and admission was eventually obtained, but much delay and waste of time was caused.

In one case a Demand of Entry notice was served.

DIVIDED CONTROL.

Anti-mosquito measures have always been carried out in Gibraltar under somewhat difficult circumstances owing to the divided control which exists, and it is considered that mosquitoes have always been more prevalent in mixed areas. The authorities concerned are the Naval, Military, Colonial, and Civil.

It is essential for the success of anti-mosquito work that these authorities should co-operate as closely as possible in their efforts to rid Gibraltar of mosquitoes.

The Medical Officer of Health is also the Deputy Assistant Director of Hygiene to the Gibraltar Command (Military) so the efforts of the Civil and Military authorities have been in close co-operation. The details of the Military scheme are given in Appendix "H."

The Sanitary Inspector specially employed on the campaign was provided with a Pass to enable him to enter Military property.

Every facility was afforded by the Colonial Government during the campaign, Colonial property being included in the routine inspections and the defects brought to notice being remedied expeditiously. Instructions dealing with mosquito prevention were issued in Circular form to all Colonial Government property by the Colonial Government. Appendix "F."

The Naval authorities carry on special mosquito measures (Appendix G) during the same period as the City Council and reports are sent in weekly as to the progress of their work.

The Medical Officer of Health frequently conferred with the Medical Officer, H.M. Dockyard, as to the details of the campaign.

RESULTS OF CAMPAIGN.

Closer co-operation was established during 1925 between the different authorities than had previously been the case, and the results, on the whole, may be considered satisfactory.

It is generally agreed that mosquitoes were far less prevalent during the summer of 1925 than previously, but they still remained numerous in certain localities.

Many people in Gibraltar have commented on the excellent results of the campaign.

SUMMARY.

The kinds of mosquitoes found at present in Gibraltar are all Culicini, the species being :—

(1) *Aëdes argenteus.*

(2) *Culex pipiens.*

(3) *Theobaldia longeareolata.*

Of the 1,104 breeding places dealt with during the year all, except 7, were in or near the vicinity of dwelling houses, and nearly half of them were wooden wash tubs.

Aëdes argenteus is a strictly household mosquito, and *Culex pipiens* is known as a domestic mosquito.

The mosquito problem in Gibraltar is, therefore, largely a domestic one.

It therefore appears that the kind of campaign best suited to Gibraltar is one based on an Ordinance making the householder and owner of property responsible for preventing the breeding of mosquitoes on his premises. Progress against household mosquitoes cannot be made, even with a large and well-trained staff, in the absence of active co-operation on the part of the householders themselves. Experience in various localities has shewn that people are indifferent to any scheme

of this sort which depends for success on their voluntary efforts, but they co-operate readily in any work which is considered of sufficient importance to need legal authorisation. A campaign in which the special staff does all the work is necessarily much more costly than one in which, for the general welfare of the town, the compulsory help of every householder is secured. A campaign authorised by law causes much less annoyance and inconvenience to householders and meets with much less opposition than a voluntary campaign, because the householder knows the purpose for which the visits are made, and the visits are much less frequent. In a voluntary campaign each house must be visited at least once a week, but in a campaign backed-up by law one visit per month is sufficient.

PROPAGANDA.

During the year the local press have given valuable assistance, and leaflets dealing with this question have been distributed throughout Gibraltar. Appendix "I."

CONCLUSION.

Whilst in England on leave I discussed the mosquito problem in Gibraltar with Sir Ronald Ross, Dr. James of the Ministry of Health, Dr. Andrew Balfour, Lieut.-Colonel W. P. MacArthur and Mr. Marshall of the Hayling Mosquito Control from whom I received valuable advice.

In writing this report reference has been made to:—

Report on a Mosquito Survey in Colombo by Dr. James.
Reports of the Hayling Mosquito Control.
Reports by Dr. Connor.
A Handbook of British Mosquitoes, by W. Dickson Lang, M.A., Sc.D.
The Mosquitoes of Egypt, by T. W. Kirkpatrick, B.A., F.E.S.,
and various publications of the Ministry of Health.

I wish to acknowledge the assistance I have received from these sources.

W. C. SMALES,
Lt.-Colonel R.A.M.C.,
Medical Officer of Health.

Gibraltar, 17th February, 1926.

APPENDIX "A."

DISTRICTS AND SUB-DISTRICTS.

DISTRICTS.	SUB-DISTRICTS.
1—Town, Upper.	No. 1.—Palace Gully Danino's Ramp Willis' Passage Calpe Terrace Willis' Road
	2.—Paradise Ramp Lower Castle Road Castle Road (Castle Steps to Moorish Castle). Tank Ramp Richardson's Passage Castle Steps
	3.—Parody's Passage Ansaldo's Passage MacPhail's Passage Chicardo's Passage Abecasis' Passage Hospital Ramp
	4.—Arengo's Palace Lane Bruce's Gully Castle Road (Castle Steps to Prince Edward's Road) Johnston's Passage Shakery's Passage Fraser's Ramp Benoliel's Passage Police Barracks Lane Hospital Hill
	5.—Prince Edward's Road (Governor's Street to Flat Bastion Road) Lime Kiln Steps Lime Kiln Road Devil's Gap Steps Lopez's Ramp Baca's Passage Flat Bastion Road
	6.—Prince Edward's Road (Flat Bastion Road to Hargraves Parade) Hargraves Parade Kavanagh's Court Charles V. Steps Booth's Passage Morello's Ramp Bado's Passage Gowland's Ramp Wilson's Ramp
2—Town, Middle.	7.—Library Gardens Town Range King's Yard Lane Victualling Office Lane Forty Steps Convent Place George's Lane Governor's Parade
	8.—Cannon Lane Church Lane Library Street Library Ramp Gavino's Court Governor's Street City Mill Lane Cornwall's Lane Horse Barrack Lane Gavino's Passage

DISTRICTS AND SUB-DISTRICTS.

DISTRICTS.	SUB-DISTRICTS.
2—Town, Middle (*Continued*).	No. 9.—Castle Ramp (Castle Clock Steps to New Passage) Castle Street New Passage Boschetti's Ramp Hospital Steps New Passage Cornwall's Parade Benzimbra's Alley
	10—Bell Lane Engineer Lane Serfaty's Passage Carreras' Passage Turnbull's Lane Lynch's Lane
	11—Castle Ramp (Northern Wall to Castle Clock Steps) Road to the Lines Demaya's Ramp Crutchett's Ramp Cooperage Lane Fish Market Road The Markets
3—Town, Lower.	12—Irish Town Parliament Lane Tuckey's Lane Commercial Square College Lane Line Wall Road (Orange Bastion to King's Street)
	13—King's Street Giro's Passage Bomb House Lane Cathedral Square Secretary's Lane Governor Lane Line Wall Road (King's Street to Southport Gates)
	14—Main Street Pitman's Alley
4—South.	15—South District
5—North Front.	16—North Front Catalan Bay

APPENDIX "B."

CITY COUNCIL OF GIBRALTAR

PUBLIC HEALTH DEPARTMENT.

Instructions to persons employed by the City Council of Gibraltar for work in the campaign against mosquitoes to ensure satisfactory results in carrying out their duties.

—0—

1—The Campaign is under the control and supervision of the Medical Officer of Health.

2—The scheme which has been prepared so that all possible mosquito breeding places are visited at least once a week, will be strictly adhered to.

3—Men employed in the campaign are required to discover and deal with all mosquito breeding places, and to assist owners and householders in every possible manner.

4—Mosquitoes breed in water in tanks, troughs, barrels, water jugs, saucers, flower pots, tinettes or Spanish jars for holding drinking water (tinajas), washing tubs, fire buckets, empty tins, wells or any place containing water whether these are kept inside or outside houses. Mosquitoes also breed in brackish water.

5—All waters containing larvæ or pupæ are considered mosquito breeding places.

6—All small vessels containing water and which are considered as breeding places for mosquitoes should be turned over after being emptied to complete the effective destruction of the larvæ.

7—In the event of an owner stating that water which contains mosquito larvæ is required, the Council s man will strain it turning the receptacle completely over so as to empty the contents to the last drop.

The owner must be informed that the strained water may again become a mosquito breeding source, and precautions must be taken to prevent this.

8—Water Tanks—All fresh water tanks should be disconnected from roofs and other catchment areas, and the inlets to such tanks closed by mosquito proof cap or other means provided for the purpose. All tanks or cisterns must be provided with mosquito proof covers ; no tank or cistern is to be regarded as mosquito proof if there exists any possible means or ingress of egress for a mosquito Overflow pipes must be effectively screened with metal gauze. Brackish water tanks must be systematically examined, ladders being used when necessary, to gain access to them, those which are found to be defective being immediately reported to the Sanitary Inspector.

9—Men on making visits of inspection should do so in a methodical manner and should keep careful notes, in a book set apart for the purpose, of all possible mosquito breeding places in every house visited. Those places should be carefully examined at each visit, as also all receptacles containing water. Notes should be taken of all places where mosquitoes are found breeding; also of all defects such as unscreened tanks, defective covers, defective gutters, gully traps, etc. All gully traps should be systematically disinfected.

All defects should be re-inspected to ensure that they have been remedied.

At the conclusion of visits to premises, after all possible breeding places for mosquitoes have been examined and every assistance given to rid the place of mosquitoes, the owner or occupier should be asked by the man inspecting to initial his book so that the visit is recorded.

10—The men employed are under no circumstances to issue orders to owners or occupiers of houses. They should make daily reports to the Sanitary Inspector.

11—The Mosquito Staff of the Council shall in the course of their duties behave in an exemplary manner, and must avoid friction with the public. They must abstain from smoking when visiting houses.

12—Men employed on mosquito work will do everything in their power to reduce to a minimum all possible breeding places for mosquitoes.

13—The Mosquito Staff will be provided with a certificate signed by the Medical Officer of Health shewing that they are employed by the City Council of Gibraltar in the campaign against mosquitoes.

This certificate must be shewn to owners or occupiers of houses visited if demanded.

14—The Sanitary Inspector employed in the campaign must be constantly in touch with the men employed on mosquito work. He is responsible for their work and conduct.

15—The Sanitary Inspector shall constantly keep the Medical Officer of Health informed of the progress of the work and shall, when in doubt, consult him in any matter that may tend to improve the efficiency of his work or that of his assistants.

W. C. Smales,

Lt.-Colonel, R.A.M.C.,

Medical Officer of Health.

Public Health Department, City Council of Gibraltar.

CITY COUNCIL OF GIBRALTAR.

—0—

MOSQUITO CAMPAIGN.

Questions to be asked by men employed on Anti-Mosquito Work when visiting premises.

—0—

To be said to the person who opens the door, before entering the house.

1. I am an employee of the City Council and have been sent to see if there are any mosquitoes breeding in or around your house and to destroy any I find. Can I see the owner of the house ?

To the owner or maid if former is out.

2. May I look round the house to see if I can destroy any mosquitoes breeding here ?

3. Will you go round the house with me and shew me all gully traps, drains, water closets, cisterns, tanks and vessels in which water of any kind is kept as it is in these that mosquitoes breed ?

4. Have you shewn me all receptacles in which water of any description is kept ?

5. Do you know of any other place either in or around the house where water is stored ?

6. Are there any mosquitoes in the house at any time ? If there are, in which room do you see them most ?

7. Do you know that mosquitoes may breed in any water that is left standing for over a week, and in consequence all moveable water receptacles should be emptied at least once a week, and all fixed tanks covered so that mosquitoes cannot get into them ?

8. I shall call again in a week's time and hope you will assist by allowing me to go round to see all the water receptacles you have shewn me to-day so that I may destroy any mosquitoes found breeding.

9. Will you kindly send word to the Public Health Department, City Hall, if at any time you are troubled with mosquitoes, and arrangements will be made to find out where they are breeding and to destroy them ?

CITY COUNCIL OF GIBRALTAR.

—0—

MOSQUITO CAMPAIGN.

Questionnaire on Anti-Mosquito Work in Gibraltar for the instruction of persons so employed.

—0—

1. Q. Why should you visit premises ?
   A. I am employed by the City Council on mosquito work and have been instructed to pay weekly visits to all premises in the District allotted to me.

2. Q. What are your duties ?
   A. My duties are to discover and destroy all breeding places of mosquitoes, and to assist owners and householders in every possible way to rid their premises of mosquitoes.

3. Q. Where do mosquitoes breed ?
   A. Mosquitoes breed in water in tanks, troughs, barrels, water jugs, saucers, flower pots and vases, tinettes or Spanish jars for holding drinking water (tinajas), washing tubs, fire buckets, empty tins, wells, or any place containing water whether these are kept inside or outside houses. Mosquitoes also breed in brackish water.

4. Q. How should inspection during visits be carried out ?
   A. The Inspection should be performed in a methodical manner and every possible breeding place of Mosquitoes be examined, as follows :

   Underground tanks—Surface drains—Gullies—Gutters—Brackish Water tanks—Water closets and Cisterns—Tubs—Barrels—Earthenware vessels (tinajas)—Flower pots and Vases—Any other container or collection of water.

5. Q. Are there any Rules which should guide you in your work ?
   A. Yes. I am provided with detailed instructions with regard to my duties, and how they should be performed. I have studied these instructions and am thoroughly familiar with them.

6. Q. What should you say to owners or occupiers of premises you are visiting ?
   A. May I go round your premises ? I am employed by the City Council of Gibraltar on mosquito work and have been instructed to visit all premises in my district weekly for the purpose of assisting householders in ridding their premises of Mosquitoes. I will ask permission to look at all vessels containing water in the house and tell them the result of my inspection, and ask them to kindly initial my book.

7. Q. Why should owners or householders be asked to sign your book ?
   A. As a record that I have visited the premises, and have carefully and methodically inspected all possible mosquito breeding places and rendered every assistance to rid the premises of mosquitoes.

8. Q. What record should you keep of visits ?
   A. I should note every detail of my inspection in the note book I carry for the purpose : where everything is in order I shall note it as correct : if larvæ are found the fact shall be recorded. All defects will be noted. Disinfection when carried out shall also be noted.

APPENDIX "C."

NUMBER OF PREMISES VISITED WEEKLY AND BREEDING PLACES FOUND.

Week ended	No. of Premises visited	Breeding places found
9th May, 1925	837	76
16th May, 1925	1000	69
23rd May, 1925	968	43
30th May, 1925	760	29
6th June, 1925	768	12
13th June, 1925	913	36
20th June, 1925	781	43
27th June, 1925	756	135
4th July, 1925	823	81
11th July, 1925	1175	68
18th July, 1925	1159	57
25th July, 1925	1193	48
1st August, 1925	1206	55
8th August, 1925	1172	45
15th August, 1925	1167	41
22nd August, 1925	1182	43
29th August, 1925	1129	24
5th September, 1925	1237	20
12th September, 1925	1266	23
19th September, 1925	1175	15
26th September, 1925	1181	14
3rd October, 1925	1182	60
10th October, 1925	1196	10
17th October, 1925	1193	25
24th October, 1925	1125	11
31st October, 1925	1096	21
Totals	27640	1104

OFFENCES IN SAME PREMISES :—

1 714	2 129	3 20
4 4	5 4	6 1

CITY COUNCIL OF GIBRALTAR.

Return of mosquito breeding places found during week ended

....., 192....

LOCALITY.	Tubs.	Barrels.	Earthenware vessels.	Others.	Total.	Number of mosquito notices served.	Number abated.	Number outstanding.	REMARKS.
TOWN DISTRICTS:									
Lower									
Middle									
Upper									
SOUTH DISTRICTS									
NORTH FRONT									
TOTAL ...									

Medical Officer of Health.

CITY COUNCIL OF GIBRALTAR.

MOSQUITO CAMPAIGN.

Details of Inspections carried out by men visiting premises.

Address ..... *Owner or Agent* .....

Dates on which inspections were carried out.

	No.														
Underground tank...															
Gullies...															
Brackish water tanks															
W.Cs. and Cisterns...															
Gutters															
Tubs															
Earthenware vessels															
Others...															
Initials of owner, occupier or caretaker															

REMARKS ... ...

Signature of person inspecting premises.

APPENDIX "D."—BREEDING PLACES.

Week ended	Town, Lower.				Town, Middle.				Town, Upper.				South.				North Front.				Totals
	Tubs	Barrels	Earthenware Vessels	Others	Tubs	Barrels	Earthenware Vessels	Others	Tubs	Barrels	Earthenware Vessels	Others	Tubs	Barrels	Earthenware Vessels	Others	Tubs	Barrels	Earthenware Vessels	Others	
9th May, 1925	5	...	7	...	16	2	1	2	20	...	1	2	6	3	...	10	1	...	...	...	76
16th May, 1925	4	...	...	...	21	1	...	1	22	1	1	1	5	3	...	1	...	...	...	5	69
23rd May, 1925	3	1	...	1	10	...	1	1	15	1	...	2	4	3	...	...	1	...	...	...	43
30th May, 1925	1	...	...	...	4	...	1	...	9	...	4	1	4	3	...	1	...	...	...	1	29
6th June, 1925	...	...	...	...	2	...	...	1	5	1	...	1	...	1	1	...	...	...	...	...	12
13th June, 1925	1	...	...	...	5	1	...	...	10	...	...	1	7	1	2	2	1	2	...	3	36
20th June, 1925	1	...	...	...	9	1	1	1	18	...	1	...	4	1	...	1	1	...	...	4	43
27th June, 1925	...	1	2	...	15	2	26	4	30	3	30	3	4	2	6	7	...	...	...	...	135
4th July, 1925	2	1	8	3	8	1	15	1	15	1	14	2	1	1	3	...	1	1	...	3	81
11th July, 1925	3	1	8	2	12	2	15	...	13	3	4	...	...	...	2	...	...	...	...	3	68
18th July, 1925	4	1	8	...	6	...	12	...	14	3	6	...	1	...	1	...	1	...	...	...	57
25th July, 1925	3	...	2	2	4	2	8	...	12	...	5	3	1	...	2	2	...	...	...	2	48
1st August, 1925	2	1	2	2	2	1	9	...	13	1	9	2	3	2	1	4	1	...	...	...	55
8th August, 1925	2	...	...	2	...	...	6	...	10	...	18	2	1	...	4	...	...	...	...	...	45
15th August, 1925	...	...	...	1	1	...	5	3	11	...	15	...	1	...	3	1	...	...	...	...	41
22nd August, 1925	2	...	...	1	4	...	2	2	10	1	11	...	1	...	3	2	1	...	...	3	43
29th August, 1925	...	...	...	...	3	...	2	...	7	...	5	1	2	...	4	...	...	...	...	...	24
5th September, 1925	1	...	...	...	2	...	2	2	6	...	3	...	...	...	2	...	1	1	...	...	20
12th September, 1925	3	...	3	1	...	2	...	...	5	...	3	...	...	2	3	1	...	...	...	...	23
19th September, 1925	...	...	...	...	2	...	...	...	3	...	2	...	1	1	2	3	...	1	...	...	15
26th September, 1925	...	...	...	...	5	...	2	...	1	2	1	...	...	...	3	...	...	...	...	...	14
3rd October, 1925	1	...	4	...	7	1	9	...	5	6	18	7	...	...	2	...	...	...	...	...	60
10th October, 1925	1	...	1	...	...	...	...	...	5	1	1	...	...	...	1	...	...	...	...	...	10
17th October, 1925	...	...	...	2	4	1	9	...	3	...	5	...	1	...	...	...	...	...	...	...	25
24th October, 1925	...	...	...	1	1	...	2	...	3	2	1	1	...	...	...	...	...	...	...	...	11
31st October, 1925	...	...	1	...	4	2	6	...	2	...	5	1	...	...	...	...	...	...	...	...	21
Totals	39	6	46	18	150	19	134	18	267	25	163	30	47	23	45	35	9	5	...	24	1104

SUMMARY.

Tubs ... ... 512 Barrels ... ... 79 Earthenware Vessels (Tinajas) ... ... 388 Others 125

OTHERS comprise :—Wash-boilers, G.I. Tanks, Wells, Gullies, Catchpits, Sumps, Concrete Tanks, Troughs, G.I. Baths, Buckets, Brackish Water Tanks, Storm Water Drains, Underground Tanks, Baths, Street Gullies, Iron Drums, Sinks, Gasometer, Sacred Font (in Church), Old Jars, Bottles, Eavesgutters, Jugs, &c.

APPENDIX "E."

MOSQUITO CAMPAIGN.

TANKS.

The question of the efficient screening of water tanks is a very important one and also one of considerable difficulty.

From observations made in many countries (International Health Board, Rockefeller Foundation, New York) in localities where the *Aëdes Calopus* (*Stegomyia Fasciata*) has acquired domesticity, the cistern or tank is the breeding place "de luxe" of this mosquito presenting as it does the best chances for the development of her young.

The Underground Tank holds an abundance of water; plenty of air is provided by means of inlet and ventilating pipes; there is ample space where the mosquito may hide during the rainy months when water is entering the cistern; there is a plentiful supply of food gathered by the rain as it passes over the roof or patio on its way to the cistern; and lastly, the sun is excluded from the surface by the cistern roof.

All fresh water tanks must therefore be disconnected from roofs and other catchment areas and the inlets to such tanks closed by a mosquito-proof cap or other means provided for that purpose.

If in the event of heavy rain the tanks are connected up, they must be disconnected again on cessation of rain and the inlets closed.

Tanks Above Ground—The majority of these are brackish water tanks. To examine these receptacles a ladder must be employed and additional help is also required. No tank or cistern is to be regarded as mosquito proof if there exists any possible means of ingress or egress for a mosquito.

All tanks must be covered so as to prevent mosquitoes gaining access to the water contained in them and laying their eggs thereon. All ventilating and overflow pipes must be efficiently screened.

Tanks may be (1) all metal (galvanized) with a circular hole covered by a metal plate; these are ideal and effectually prevent mosquitoes breeding, (2) open tanks provided with either a wooden or metal cover.

Wooden covers are easily damaged in some way, becoming rotten, shrunken, or warped thus leaving an easy passage for mosquitoes. This may be obviated to some extent by covering the wood cover with galvanized sheeting or zinc sheeting. Metal covers of galvanized metal sheeting have been found to be very efficient,

NOTE ON FLIGHT OF MOSQUITOES THROUGH WATER PIPES.

Observations carried out in America show that

(*a*) Mosquitoes entered and left cisterns through unscreened perpendicular waterspouts 2½ and 3 inches in diameter and 14 and 10 feet high.

(*b*) Mosquitoes bred in cisterns and having no other means of exit passed through horizontal pipes 4 and 5 inches in diameter for a distance of 191 feet in the longest instance, aided probably to a certain degree by air currents.

These observations show the importance of screening waterspouts and other pipes leading into cisterns and similar deposits of water.

although if thin sheeting is employed it is likely to perish especially in brackish water tanks. The metal cover should have a rim 3" to 4" round the sides so that they can be suitably adjusted unless they are securely rivetted to the edges of the receptacles and have no cracks through which mosquitoes can escape.

Tanks Supplying Lavatories, Latrines, &c., are often placed outside buildings and frequently not screened or covered.

If the tank is not regularly emptied, as in the case of unoccupied premises, school during holidays, &c., these tanks at once become a breeding place for mosquitoes. If the tanks are emptied every day, occasionally, the outlet pipe is half to one inch above the bottom of the tank, and this prevents the tank being completely emptied, the small quantity of water remaining in the tank serves as a mosquito breeding place.

Sealing of Tanks—A properly covered tank requires no attention from an Inspector during the mosquito season unless the cover has been removed or tampered with.

To aid in determining this and to avoid frequent inspections necessitating the use of a ladder, it is sometimes ordered that all tanks certified mosquito proof shall be sealed in such a manner that the cover cannot be removed without breaking the seal, and this seal is so placed that an Inspector can tell at a glance if it has been tampered with.

The sealing of a tank is a measure that must be properly carried out if it is to achieve its purpose, that is to say, before the seal is placed the cover must be so adjusted that the tank is positively mosquito proof.

Inspection of tanks—Every tank must be systematically inspected; this involves a considerable amount of ladder work and assistance is therefore necessary.

No tank is to be regarded as mosquito proof if there exists any possible means of ingress or egress for a mosquito, and unless repeated observations have proved the absence of larvæ during the breeding season.

Removal of Tanks—It is sometimes found that tanks can be dispensed with; the removal of storage tanks and provision of a direct supply of water from the mains is a most excellent policy as far as mosquito prevention is concerned.

APPENDIX "F."

Circular No. 83.

Colonial Secretary's Office,
Gibraltar, 28th May, 1924.

MOSQUITO PREVENTION.

The following instructions for the prevention of Mosquitoes should be brought to the notice of all concerned, and Heads of Departments should use their best endeavours to see that they are carried out.

C. W. J. ORR,
Colonial Secretary.

1. All fire buckets should be emptied and re-filled and all gully traps disinfected with Zotal on a given day once a week.
2. All fresh water tanks should be disconnected from roofs and other catchment areas, and the inlets to such tanks closed by the mosquito proof cap or other means provided for that purpose.
3. In the event of heavy rain the tanks may be connected up, but they must be disconnected again as above on cessation of rain.
4. No uncovered fresh water should be allowed to stand for a longer period than one week without being changed.
5. It is well to remember that the commonest places in which mosquitoes breed are : water jugs, flower vases, saucers and flower pots, tinettes or Spanish jars for holding drinking water, washing tubs, fire buckets, grindstone troughs, empty tins, holes in tree trunks, or any place in which collections of water may accumulate.
6. The gullies under kitchen sinks and those in yards should be treated once a week by having a small quantity of disinfectant poured down them.
7. If mosquitoes are found in any building and the breeding place cannot be traced by men employed in the department concerned, the Medical Officer of Health should be requested to investigate.
8. The Director of Public Works will see that all tanks and cisterns have mosquito-proof covers and screened outlets and will cause sagging eaves-gutters to be repaired without delay.

APPENDIX "G" (i)

DUTIES OF ANTI-MOSQUITO PATROL.

1. The anti-mosquito patrol has been detailed to patrol the following residences and establishments on the days stated in search of Mosquito larvæ, every week.

2. Householders and Officers in charge of Establishments are requested to give him every facility for investigation.

3. He will present a book at each visit which should, if possible, be initialled by a responsible person in the house or establishment.

4. Any complaints as to the prevalence of mosquitoes in any house or establishment should be reported in writing S.M.O., H.M. Dockyard.

5. Should the Mosquito Patrol fail to report weekly at any of the undermentioned residences a report should be sent in writing to the S.M.O., H.M. Dockyard.

Monday.	North Front W/T. North Mole H.M.S. "Cormorant" Naval Officer's Pavilion Reclamation Road Residences Naval Picket House
Tuesday.	H.M. Dockyard H.M. Ships alongside
Wednesday.	The Elms Rose Tree Cottage Tower Buildings Cumberland Buildings New Mole House
Thursday.	Jumper's Buildings Bado's Buildings Hillside The Mount Rock W/T.
Friday.	Naval Hospital Windmill Hill W/T. Rosia Residences Victualling Yard
Saturday.	East Side (Monkey Quarry)

A. S. COTTON,
Rear-Admiral in Charge,
Gibraltar.

APPENDIX "G" (ii).

ANTI-MOSQUITO CAMPAIGN.

Householders and those in charge of establishments, gardens and outhouses are reminded that the best way to keep down the prevalence of Mosquitoes is to destroy the larvæ and to prevent the Mosquito from having access to water. The fully developed Mosquito emerges from the larvæ in about a week to ten days according to the temperature. Therefore a weekly inspection of all places containing or likely to contain still water is considered necessary.

To destroy mosquito larvæ all that is required is to pour a little disinfectant fluid into drains and gullies in the neighbourhood of houses, etc., or to change all water which may be used for birds and animals at least once a week.

After a rainfall particular care should be taken to see that no water is allowed to remain in crevices, tubs, or tins and the following list is given as a help to locate possible breeding places which may otherwise escape notice :—

BREEDING PLACES.	BREEDING PLACES.
Basins	Holes in trees
Barrels (wooden)	Holes in stones
Baths	
Bottles	Jars and Jugs
Bottles on walls	
Buckets	Lavatory basins
Buckets Fire	Lids on manholes or Cisterns
Baths G.I.	Leaves on ground
	Machinery
Cans	
Catchpits	Pans
Cisterns	Pools
Cups and Mugs	Plates under Flowerpots
Dishes	Saucepans
Drains { Built / Unbuilt	Sinks
Drums	Soapdishes
Dustbins	Slop pails
	Spittoons
E.W. Vessels (TINAJAS)	Storage reservoirs
E.W. Waterpots	Storm water drains
Eavesgutters	Swamps
	Tanks G.I.
Flowerpots	Tanks B.W.
Flushing tanks	Tanks concrete
Fountain basins	Troughs
	Tubs Wooden
Grindstones	Tins
Gullies { Street / House	Tanks underground
Gutters { Eaves / Valley	Vases
Gasometers	Wells

APPENDIX "G" (iii.)

Mosquito Return for week ending ..... 19?.....

Date.	Places visited.	Tubs.	Barrels.	Vessels.	Others.	Total.	Abated.	Outstanding.	Remarks.

Surgeon Commander.

APPENDIX "H" (i)

FORTRESS ORDERS
BY
HIS EXCELLENCY THE GOVERNOR AND COMMANDER-IN-CHIEF, GIBRALTAR.

Thursday, 30th April, 1925.

ADMINISTRATIVE STAFF ORDERS.

301. * * * * * * * * * * *

302. MOSQUITOES—

Commanding Officers will ensure that the following instructions are carried out for the prevention of mosquitoes.

All fresh water tanks will be disconnected from roofs and other catchment areas, and the inlets to such tanks closed by the mosquito proof cap or other means provided for that purpose.

In the event of heavy rain the tanks may be connected up but they must be disconnected again as above on cessation of rain. All tank covers must be kept in a proper state of repair.

In cases where there is delay in the repair or replacement of covers to Sanitary water cisterns after an application has been made, the water in the cisterns should be covered by a thin layer of paraffin oil. This work will be carried out by the troops where the cisterns are accessible, and in all other cases by the Royal Engineers. Paraffin oil for this purpose should be obtained as laid down in para. 419, Regulations for Supply, Transport and Barrack Services.

The Regimental Sanitary Squads must (1) see that all tanks are mosquito proof, (2) search thoroughly for all possible breeding places, *e.g.*, any casual receptacle which may hold water, and when found deal with them in the manner best suited to each, (3) treat once a week with Paraffin oil tanks and cisterns which are not mosquito proof and with cresol solution weekly all rainwater gully traps, yard traps, soak pits and grit sumps. (N B.) Very weak solutions of cresol are sufficient to destroy mosquito larvæ. (4) Report structural defects, *e.g.*, sagging eavesgutters, (5) compile a daily report on a special form, to be obtained from the Regimental Medical Officer of areas dealt with each day. This form will be submitted weekly to the Regimental Orderly Room, and after extraction of the necessary records forwarded to the D.A.D H. through the Regimental Medical Officer.

The N C O. in charge will be provided with a large scale map of the cleaning area shewing the situation of all water tanks, and must keep a book containing a record of such cisterns, tanks, gully traps, soak pits, &c., in the section for which he is responsible noting their condition.

No tank or cistern is regarded as being mosquito proof if there exists any possible means of ingress or egress for a mosquito, and unless repeated observation has proved the absence of larvæ, during the breeding season.

Wooden inspection doors or covers of tanks may, by becoming damaged, shrunken or warped, leave an easy passage for mosquitoes.

It is most important that unoccupied quarters on the charge of units should be visited at frequent intervals In the past mosquitoes have been found breeding in collections of water remaining from the last rains, as well as in the flushing cisterns and pans of water closets, &c.

No uncovered fresh water should be allowed to stand for a longer period than one week without being changed.

It is well to remember that the commonest places in which mosquitoes breeds are :—water jugs, flower vases, saucers and flower pots, tinettes or Spanish jars for holding drinking water, washing tubs, fire buckets, grindstone troughs, empty tins, holes in tree trunks, or any place in which collections of water may accumulate.

The gullies under kitchen sinks and those in yards should be treated once a week by having a small quantity of disinfectant poured down them

An officer will be detailed in each unit to exercise supervision in conjunction with the Regimental Medical Officer over the work of mosquito prevention.

Commanding Officers will forward to Military Headquarters by 10th May, 1926, details of the anti-mosquito scheme for their units and will report the name of the officer detailed to exercise supervision over the work.

APPENDIX "H" (ii.)

..... Battalion The ..... Regiment.

Mosquito Return for week ending ..... 192.....

Date.	Places visited.	Tubs.	Barrels.	Vessels.	Others.	Total.	Abated.	Out-standing.	Remarks.

N.B.—To be completed from daily reports and submitted weekly to the Regimental Orderly Room and after extraction of the necessary records, to be forwarded to the D.A.D. (H) through the Regimental Medical Officer.

.....

Officer i/c Mosquito Campaign.

Defects found during week.

Defects.	Remedied.	Remarks.

APPENDIX "I."

MOSQUITOES.

The mosquito common in Gibraltar is the Stegomyia Fasciata which is the carrier of Yellow Fever. This disease was present in epidemic form at Gibraltar on the following occasions:—

Year	*Deaths*
1804	5,733
1813	899
1828	1,667

With the opening of the Panama Canal it was realised that the Colony was brought into direct communication by sea with countries in which Yellow Fever was endemic, and there is direct communication between the West Coast of Africa, and the South of Spain and Gibraltar.

The Stegomyia is what is known as a domestic mosquito, that is one which habitually breeds in water used for domestic purposes in or about a house.

In Gibraltar nearly every house has a fresh water tank, and water is stored for washing and other purposes in barrels and open tubs.

The Stegomyia mosquito breeds as much inside as outside rooms in tanks, troughs, barrels, water jugs, saucers, flower pots, tinettes or Spanish jars for holding drinking water, washing tubs, fire buckets, empty tins, wells or any place containing water. It also breeds in brackish water.

The female deposits its eggs on the surface of the water, and two or three days later the eggs develop into larvæ which subsequently are converted into mosquitoes.

The eggs of the mosquitoes are easily seen, being very similar to small particles of dust disseminated on the surface of the water, and the larvæ are small worm-like creatures which can easily be seen with the naked eye.

You can help in reducing the number of mosquitoes by covering your tanks, pipes and other receptacles which you have at home in such a manner as to prevent mosquitoes entering them. All receptacles which cannot be conveniently covered should be inspected at least once a week, and if found to contain eggs or larvæ the water should be strained through a piece of cloth after which the eggs and larvæ remaining in the cloth should be thrown on a dry place, preferably in the sun so that they are destroyed. Think how easy it would be to diminish the number of mosquitoes if every member of a family inspected their water receptacles once a week and put into practice the direction given above.

The City Council employs a staff especially for Anti-Mosquito work and their work is greatly facilitated by co-operation with the public. If you take an interest in Gibraltar, and in your own and other people's comfort, it will be a matter of satisfaction when you realize that you have contributed towards the abolition of mosquitoes (a dangerous nuisance). Little is expected from you, simply to disconnect rain water pipes, close up tanks, change water in washing tubs at least once a week, and cover all water receptacles in such a manner as not to allow mosquitoes to enter them and lay their eggs on the water. Receptacles which cannot be covered should be inspected and dealt with weekly. Water receptacles should be turned upside down so that the contents, to the last drop, would drain off, otherwise you could not safely say that all larvæ which it contained had been removed. At times the eggs and larvæ adhere to the sides of the tanks, water receptacles, &c., and it is solely by turning over the receptacles that it can be guaranteed that they have fallen out and will be eventually destroyed.

Gullies under kitchen sinks and those in patios should be treated once a week by having a small quantity of disinfectant poured down them.

WATER TANKS.—All fresh water tanks should be disconnected from roofs and other catchment areas and the inlets to such tanks closed by mosquito proof cap or other such means provided for the purpose. In the event of heavy rain when tanks are connected up they must be disconnected again with full precautions on cessation of rain. No tank or cistern is regarded as being mosquito proof if there exists any possible means of ingress or egress for a mosquito. Wooden inspection doors or covers of tanks may, by becoming damaged, shrunken, or warped, leave an easy passage for mosquitoes.

It is most important that unoccupied quarters should be visited at regular intervals; arrangements for this should be made by owners and tenants. Sagging eavesgutters after rain become breeding places for mosquitoes.

The City Council cannot demand less from you
and you cannot do less than is demanded.

If mosquitoes are found in any building and the breeding place cannot be traced, the Medical Officer of Health should be immediately informed.

PUBLIC HEALTH DEPARTMENT,
CITY HALL, GIBRALTAR.

MOSQUITOS.

El mosquito corriente en Gibraltar es el designado con el nombre de Stegomya que es portador de la Fiebre Amarilla. Esta enfermedad prevaleció en Gibraltar en forma epidémica en las siguientes fechas :—

1804	5,733	muertes
1813	899	,,
1828	1,667	,,

La apertura del Canal de Panamá pone a Gibraltar en comunicación directa con paises donde ésta enfermedad es endémica, y existe también comunicación directa entre el Africa Occidental, Sud de España y Gibraltar.

El mosquito Stegomya es lo que comunmente se llama un mosquito doméstico o sea un mosquito que procrea en aguas utilizables para uso doméstico bien sea dentro o cerca de viviendas. También procrean en la llamada agua sanitaria.

En Gibraltar casi todas las casas tienen una cisterna de agua dulce, y existe la costumbre de almacenar agua para lavar, &c., en tinas y barriles descubiertos.

El mosquito Stegomya se reproduce en nuestras habitaciones o cerca de ellas en tanques, barriles, tarros, floreros, maceteros, pozos, excavaciones en los patios o debajo de las casas, tinajas y en todo sitio conteniendo agua.

La hembra deposita sus huevos en la superficie del agua contenida en los receptáculos antes mencionados ; dos o tres dias despues los huevos se transforman en gusarapos y pocos dias más tarde éstos gusarapos se convierten en mosquitos. Los huevos de los mosquitos se reconocen facilmente asemejándose a pequeñas partículas de polvo diseminadas en la superficie del agua, y los gusarapos son pequeños animalitos que se distinguen facilmente en el agua sin ayuda de aparato alguno.

Vd. puede ayudar a que se reduzca el número de mosquitos, tapando sus tanques y otros receptáculos que tengan en la casa en forma tal que no puedan entrar los mosquitos. Los receptáculos que no puedan taparse facilmente, deben de inspeccionarse por lo menos una vez por semana, y siempre que se encuentren huevos o gusarapos hay que filtrar el agua a traves de un trapo teniendo cuidado de arrojar los huevos o gusarapos que queden en el trapo a un lugar seco, de preferencia donde bañe el sol, para que de ese modo mueran. Piense Vd. en lo facil que sería disminuir el número de mosquitos si cada miembro de familia pasara vista por sus depósitos de agua por lo menos una vez por semana y pusiera en práctica las instrucciones aconsejadas en ésta hoja.

El Concejo de la Ciudad emplea un número de hombres en la campaña contra los mosquitos, pero el éxito de esta campaña depende muy mucho en la ayuda que preste el público en general. Este es un exhorto que se hace a todo aquel que se interese por su bienestar propio y el de sus conciudadanos, será motivo de satisfaccion para Vd. pensar que ha contribuido a la abolición de tan molesto como peligroso enemigo de la humanidad.

Piense en lo poco que se exige de Vd., solamente que cubra sus tanques, barriles y otros receptáculos conteniendo agua en forma que no puedan entrar los mosquitos, y caso que no sea factible taparlos, que cambie el agua una vez por semana. Todo receptáculo que no admita de ser tapado debe vigilarse con el fin de que no se convierta en criadero. Todo receptáculo una vez convertido en criadero deberá volcarse, quedando en posición invertida unos minutos con el fin de que escurra bien y así asegurar que no han quedado dentro gusarapos ni huevos.

Los caños de patio y sumideros deberán ser tratados con una pequeña cantidad de desinfectante una vez por semana.

CISTERNAS DE AGUA DULCE.—Las cisternas de agua dulce deberán, una vez terminada la estación de lluvia, aislarse de tejados y areas de recolección, y las aberturas de entrada del agua tapadas para así evitar el acceso al mosquito. Caso de copiosa lluvia podrán ser de nuevo conectadas cuidando de tomar las mismas precauciones una vez terminada.

Ningún receptáculo de agua puede considerarse como seguro en lo que se relaciona a la cria de mosquitos a menos que esté dispuesto de forma que no puedan entrar éstos.

Las tapaderas de madera no deben considerarse como seguras debido a que la acción del agua y sol hace que se agrieten y dejen libre paso a los mosquitos.

Es de suma importancia que toda vivienda inhabitada sea inspeccionada periódicamente, debiendo los dueños de ellas hacer los arreglos pertinentes al caso.

El Concejo de la Ciudad no podría pedir menos de Vd.,
y Vd. sin duda alguna no podría darle menos.

Caso de que existan mosquitos y no se dé con su procedencia, sírvanse avisar inmediatamente en el Departamento de Higiene Pública, City Hall.

DEPARTAMENTO DE HIGIENE PUBLICA,
CITY HALL, GIBRALTAR.